

Hazardous Contaminants
and Standards Branch
JUN 20 1983
MINISTRY OF THE
ENVIRONMENT

Table with 10 columns and 10 rows. The columns are labeled: NAME, ADDRESS, CITY, PROVINCE, POSTAL CODE, PHONE NO., FAX NO., TELETYPE NO., TELEX NO., and REMARKS. The rows are numbered 1 through 10.

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ECONOMIES IN THE BUDGET

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I AM PLEASED TO REPORT TO HONOURABLE MEMBERS THAT, IN THE PROPER SPIRIT OF ECONOMIC RESTRAINT, MY MINISTRY IS PREPARED TO CONTINUE PROVIDING A WIDE RANGE AND HIGH LEVEL OF SERVICES FOR LESS MONEY.

MY OFFICIALS ASSURE ME THAT, LARGELY AS A RESULT OF CHANGING PRIORITIES, WE WILL MEET OUR PERFORMANCE TARGETS WITH A TOTAL BUDGET FOR 1983-84 OF \$314 MILLION -- OR A REDUCTION OF \$32 MILLION FROM THE PREVIOUS FISCAL YEAR.

THE \$32 MILLION REDUCTION WAS ACCOMPLISHED ONLY AFTER AN EXHAUSTIVE STUDY OF COMMITMENTS AND PRIORITIES.

THE DISBURSEMENT ACCOUNT WAS REDUCED BY \$31 MILLION. THESE FUNDS ARE USED FOR CONSTRUCTION OF PROVINCIALLY OWNED AND OPERATED WATER AND SEWAGE WORKS. THE \$69 MILLION ALLOCATED FOR 1983-84 WILL BE JUST ADEQUATE TO PROVIDE FOR CARRY-OVER COSTS OF PROJECTS UNDER CONSTRUCTION.

NO NEW DISBURSEMENT PROJECTS ARE SCHEDULED AT PRESENT. THE POSSIBILITY OF NEW CONSTRUCTION IS NOT PRECLUDED, HOWEVER, IN WHICH EVENT A BUDGETARY ADJUSTMENT WOULD BE NECESSARY.

UP-FRONT GRANT ASSISTANCE WAS REDUCED BY \$3 MILLION. THIS PROGRAM ASSISTS MUNICIPALITIES UNDERTAKING THEIR OWN CONSTRUCTION. THE \$61 MILLION ALLOCATED WAS SUFFICIENT TO ACCOMMODATE THE BULK OF MUNICIPAL REQUESTS FOR ASSISTANCE. WITH THE ADDITIONAL \$7.9 MILLION RECENTLY PROVIDED BY THE TREASURER FOR JOB CREATION, THE MINISTRY EXPECTS TO BE ABLE TO UNDERTAKE A FIRST-RATE MUNICIPAL ASSISTANCE PROGRAM.

PROGRAMS ARE BEING REORGANIZED TO MEET NEW CONDITIONS AND PRIORITIES. A PROPOSAL IS BEING DEVELOPED TO SIMPLIFY AND INTEGRATE OUR GRANT PROGRAMS TO ASSIST IN THE CONSTRUCTION OF MUNICIPAL WATER AND SEWAGE WORKS.

THE CHANGES WILL LEAD TO MORE COST-EFFECTIVE DESIGN AND CONSTRUCTION AND HELP MUNICIPALITIES OBTAIN A BETTER IDEA OF THEIR SHARE OF COSTS IN ADVANCE OF PROJECT DEVELOPMENT.

WE ARE ALSO PAYING SPECIAL ATTENTION TO THE IMPORTANT MATTER OF KEEPING OUR EXISTING WATER AND SEWAGE SYSTEMS IN GOOD CONDITION.

CIRCUMSTANCES IN GREAT BRITAIN, CONTINENTAL EUROPE AND THE OLDER URBAN AREAS OF NORTH AMERICA OFFER A WARNING. SOME OF THE OLDER SYSTEMS IN THESE REGIONS -- MANY INSTALLED MORE THAN A CENTURY AGO -- ARE COLLAPSING AND CAUSING SERIOUS DISRUPTION OF SERVICES. COSTS OF ESSENTIAL REHABILITATION WILL BE VERY LARGE.

TO FORESTALL THE SAME PROBLEM OCCURRING IN ONTARIO, WE HAVE UNDERTAKEN AN EXAMINATION OF THE OLDER SYSTEMS IN THE PROVINCE. COSTS INVOLVED IN DEVELOPING EFFECTIVE PROGRAMS OF RENEWAL WILL BE IDENTIFIED.

WE ARE MAINTAINING A HIGH LEVEL OF ACTIVITY IN SUCH ENVIRONMENTAL PROTECTION PROGRAMS AS THOSE DEALING WITH ACID RAIN AND CONTAMINATION OF THE NIAGARA RIVER. A LARGE ITEM IN THE SAME CATEGORY IS THE OPERATION OF PROVINCIALY-OWNED WATER AND SEWAGE TREATMENT PLANTS.

ENVIRONMENTAL RESEARCH IS UP \$500,000, TO \$2.3 MILLION.

OPERATION OF WATER AND SEWAGE TREATMENT PLANTS IS UP \$7.6 MILLION, TO \$67.9 MILLION.

IN SUMMARY, THROUGH ITS PLANNING PROCESS THE MINISTRY HAS BEEN ABLE TO TAKE ADVANTAGE OF A TEMPORARY LULL IN MUNICIPAL CONSTRUCTION TO IMPOSE A REDUCTION IN EXPENDITURES, AND SO PROVIDE FOR CERTAIN HIGH-PRIORITY ITEMS AND CONTRIBUTE TO THE GOVERNMENT'S BUDGET RESTRAINT.

REORGANIZATION

JUST ONE YEAR AGO I ANNOUNCED IN THE LEGISLATURE AN AMBITIOUS PLAN FOR THE REORGANIZATION OF THE MINISTRY OF THE ENVIRONMENT TO MEET THE CHALLENGES OF THE 1980s. TODAY, IT GIVES ME SOME MEASURE OF SATISFACTION TO REPORT THAT THE REORGANIZATION IS SUBSTANTIALLY COMPLETE.

MINISTRY EFFORTS DURING THE 1960s AND 1970s WERE PRIMARILY DIRECTED TOWARDS CONTROL OF TRADITIONAL POLLUTANTS, WHICH ARE NOW LARGELY REGULATED AND WILL BASICALLY ONLY REQUIRE THE MAINTENANCE OF EXISTING PROGRAMS.

ONTARIO'S INVESTMENTS IN WATER AND SEWAGE TREATMENT FACILITIES HAVE PAID LARGE DIVIDENDS IN THE PROTECTION OF OUR WATERWAYS AND DRINKING WATER. AIR POLLUTION CONTROL MEASURES HAVE SIGNIFICANTLY IMPROVED AIR QUALITY. OUR SOLID WASTE PRACTICES HAVE IMPROVED MARKEDLY.

HOWEVER, A NEW AWARENESS OF POTENTIAL HEALTH EFFECTS AND ENVIRONMENTAL IMPACTS OF MANY POLLUTANTS IMPOSES A NEW SET OF CHALLENGES. FOR INSTANCE, A NUMBER OF POLLUTANTS NOW OF CONCERN COULD NOT PREVIOUSLY BE IDENTIFIED AT VERY LOW CONCENTRATIONS.

THE MINISTRY ALSO HAS INCREASING CONCERN OVER DIFFUSE OR HARD-TO-CONTROL SOURCES OF POLLUTION THAT WERE NOT PREVIOUSLY REGULATED. IT IS INCREASINGLY REALIZED THAT REGULATION INVOLVES THE DIFFICULT EVALUATION OF RISKS AND THE PROPER ASSESSMENT OF BENEFITS AND COSTS.

THESE NEW CIRCUMSTANCES HAVE LED THE MINISTRY TO RECONSIDER ITS CORPORATE MANDATE. AS A RESULT, THE MINISTRY HAS ADOPTED THE FOLLOWING GOAL STATEMENT:

TO ACHIEVE AND MAINTAIN A QUALITY OF THE ENVIRONMENT -- INCLUDING AIR, WATER AND LAND -- THAT WILL PROTECT HUMAN HEALTH AND THE ECOSYSTEM AND WILL CONTRIBUTE TO THE WELL-BEING OF THE PEOPLE OF ONTARIO.

THE REORGANIZATION HAS BEEN DESIGNED TO IMPROVE THE MINISTRY'S ABILITY TO:

- DEAL EFFECTIVELY WITH THE MINUSCULE AMOUNTS OF POTENTIALLY DANGEROUS MATERIALS NEWLY DETECTED BY VASTLY IMPROVED ANALYTICAL TECHNIQUES.

- DEAL EFFECTIVELY WITH DAMAGES CAUSED BY THE LONG RANGE TRANSPORT OF POLLUTANTS ACROSS INTERNATIONAL BOUNDARIES.

- CONTINUE ITS SUCCESSFUL FIGHT AGAINST TRADITIONAL FORMS OF WATER, AIR AND LAND POLLUTION.

- IMPROVE THE PUBLIC'S INPUT INTO THE DEVELOPMENT OF ENVIRONMENTAL STANDARDS.

IN ORDER TO MEET THESE NEWLY RECOGNIZED NEEDS AND TO PUT GREATER FOCUS ON THE REGULATION OF DISCHARGES TO THE ENVIRONMENT, THE MINISTRY REQUIRED AN IMPROVED AND FUTURE-ORIENTED ORGANIZATION.

A NEW ORGANIZATION STRUCTURE FOR THE MINISTRY IS NOW EFFECTIVELY IN PLACE. IT MAY BE BRIEFLY SUMMARIZED AS FOLLOWS:

REPORTING DIRECTLY TO THE DEPUTY MINISTER ARE FOUR MAJOR DIVISIONS:

- AN ENVIRONMENTAL PLANNING DIVISION.
- AN INTERGOVERNMENTAL RELATIONS AND STRATEGIC PROJECTS DIVISION.
- A REGIONAL OPERATIONS DIVISION, AND
- A FINANCE AND ADMINISTRATION DIVISION

AS WELL, A POLICY AND PLANNING BRANCH EVALUATES THE MINISTRY'S POLICIES, PROGRAMS AND RESOURCE NEEDS AND CO-ORDINATES THE EFFECTIVE MANAGEMENT AND EFFICIENT UTILIZATION OF MINISTRY RESOURCES.

IN THIS RESPECT, LET ME SPEND JUST A MOMENT ON OUR MANAGEMENT STANDARDS AND IMPROVEMENT PROJECT, WHICH IS ESSENTIAL TO IMPROVE MANAGEMENT PRACTICES IN ORDER TO MEET ENVIRONMENTAL CHALLENGES IN THE MOST EFFECTIVE AND EFFICIENT MANNER.

SPECIFIC PROVISION HAS BEEN MADE FOR:

- DEVELOPMENT AND INTRODUCTION OF A STRATEGIC PLANNING PROCESS.
- IMPROVEMENT OF THE POLICY DEVELOPMENT PROCESS.

. IMPROVEMENT OF THE OPERATIONAL PLANNING
PROCESS .

THIS WILL IMPROVE ON THE MINISTRY'S
CAPABILITIES TO ANTICIPATE AND PLAN FOR LONG-RANGE
ENVIRONMENTAL NEEDS. IT WILL ALLOW US TO
REALLOCATE RESOURCES TO MEET EMERGING ENVIRONMENTAL
NEEDS, WHILE ALSO ASSISTING US IN TAILORING
EXISTING PROGRAMS TO MEET CURRENT ENVIRONMENTAL
NEEDS MORE CLOSELY .

THE MINISTRY HAS HAD IN PLACE SINCE 1979
FORMAL PROCESSES TO DEVELOP AND APPROVE MINISTRY
POLICY. THE INITIAL TASK THAT WAS GIVEN TO THE
VARIOUS BRANCHES WAS TO REVIEW AND FORMALIZE THE
EXISTING GUIDELINES AND PROCEDURES THAT ARE STILL
OF INTEREST. THIS TASK IS WELL UNDER WAY AND HAS
RESULTED IN THE POLICIES CONTAINED IN THE MANUAL OF
ENVIRONMENTAL POLICIES AND GUIDELINES. THESE
POLICIES ARE AVAILABLE TO THE PUBLIC ON REQUEST .

THE SECOND TASK, WHICH IS AN ONGOING MINISTRY
RESPONSIBILITY, IS TO DEVELOP NEW POLICIES WHERE
THEY ARE NEEDED TO IMPROVE THE OVERALL OPERATION OF
THE ORGANIZATION AND PROVIDE GUIDANCE TO STAFF .
THESE NEWER POLICIES ARE BEING PRODUCED AND
DISTRIBUTED PERIODICALLY .

I AM PLEASED TO REPORT THAT OUR POLICIES PERTAINING TO ENVIRONMENTAL CONSIDERATIONS IN LAND-USE HAVE BEEN ACCORDED GREAT RESPECT BY THE ONTARIO MUNICIPAL BOARD. I BELIEVE THAT THIS INDICATES THE HIGH-QUALITY PRODUCT THAT THE MINISTRY IS PRODUCING.

I AM HOPEFUL THAT WHERE OUR OTHER AREAS OF POLICY ARE SCRUTINIZED BY EXTERNAL AGENCIES, OR BY THE GENERAL PUBLIC, THE SAME KIND OF RESPECT WILL BE EVIDENT.

WHILE IT WOULD BE QUITE UNREALISTIC TO EXPECT THAT ALL PARTIES AFFECTED BY MINISTRY POLICY WILL BE IN AGREEMENT ON EVERY POLICY ISSUE, I AM HOPEFUL THAT THE PUBLIC AND OTHER INTERESTED PARTIES WILL BE ABLE TO GIVE THE MINISTRY'S POLICIES AND PROGRAMS THE SUPPORT I FEEL THEY DESERVE.

I WILL SKETCH FOR YOU WHAT REORGANIZATION MEANS IN TERMS OF THOSE SERVICES WHICH PERHAPS HAVE THE HIGHEST PUBLIC VISIBILITY. THE INTERNAL DETAILS, WHILE VITALLY IMPORTANT TO US, ARE NOT GENERALLY THE FOCUS OF PUBLIC ATTENTION.

I MENTIONED OUR NEW ENVIRONMENTAL PLANNING DIVISION. ITS ROLE IS TO DEVELOP PLANS AND PROGRAMS WHICH WILL:

- PROTECT AIR QUALITY
- PROTECT SURFACE AND GROUND WATER QUALITY AND QUANTITY.
- MANAGE WASTES
- ENSURE AN ADEQUATE QUALITY OF DRINKING WATER, AND
- PROMOTE THE CONSIDERATION OF THE ENVIRONMENT IN THE PLANNING AND DEVELOPMENT OF UNDERTAKINGS.

THE ENVIRONMENTAL PLANNING DIVISION CONSISTS OF SIX BRANCHES:

- . AN AIR RESOURCES BRANCH
- . A WATER RESOURCES BRANCH.
- . A WASTE MANAGEMENT BRANCH.
- . A HAZARDOUS CONTAMINANTS AND STANDARDS BRANCH.
- . AN ENVIRONMENTAL ASSESSMENT BRANCH, AND
- . A LABORATORY SERVICES AND APPLIED RESEARCH BRANCH.

THE OTHER UMBRELLA STRUCTURE IN MY MINISTRY'S REORGANIZATION IS THE INTERGOVERNMENTAL RELATIONS AND STRATEGIC PROJECTS DIVISION, WHOSE ROLE IS TO CO-ORDINATE THE MINISTRY'S APPROACH TO DESIGNATED CRITICAL ISSUES AND ORCHESTRATE ITS INTERGOVERNMENTAL ACTIVITIES.

THE DIVISION:

- PROVIDES A RESPONSIVE STRUCTURE TO DEAL WITH DESIGNATED ISSUES WHICH HAVE A HIGH PROFILE AND REQUIRE CO-ORDINATED AND INTEGRATED ACTION ACROSS A NUMBER OF MINISTRY BRANCHES.

- ASSISTS IN THE DEVELOPMENT OF THE MINISTRY'S POSITION TO RESOLVE POLLUTION PROBLEMS THAT ARE SHARED WITH OTHER JURISDICTIONS BOTH NATIONALLY AND INTERNATIONALLY, AND

- DEVELOPS BILATERAL AND MULTILATERAL AGREEMENTS WITH OTHER JURISDICTIONS IN SUPPORT OF THE MINISTRY'S ONGOING CONTROL STRATEGIES.

ITS MANDATE IS DYNAMIC. IT IS CURRENTLY COMPOSED OF TWO OFFICES AND THREE STRATEGIC PROJECTS, AS FOLLOWS:

- THE INTERGOVERNMENTAL RELATIONS OFFICE.
- THE EMERGENCY RESPONSE CO-ORDINATION OFFICE.
- THE ACID PRECIPITATION PROJECT.
- THE NIAGARA RIVER IMPROVEMENT PROJECT, AND
- THE WASTE DISPOSAL SITE PROJECT, WHICH EXPANDED INTO THE BLUEPRINT FOR WASTE MANAGEMENT, ABOUT WHICH I'LL SAY MORE LATER.

I WILL PROVIDE A BRIEF DESCRIPTION OF THE REGIONAL OPERATIONS DIVISION, WHICH IS THE COMPLIANCE AND DELIVERY ARM OF THE MINISTRY. ITS JOB IS TO ENFORCE REGULATIONS, CONTROL EMISSIONS, AND DELIVER ABATEMENT PROGRAMS IN ACCORDANCE WITH PLANS AND POLICIES DEVELOPED BY THE ENVIRONMENTAL PLANNING DIVISION.

THE ROLE OF THE REGIONAL OPERATIONS DIVISION IS TO DELIVER PROGRAMS TO:

- PROTECT AIR QUALITY.

- PROTECT SURFACE AND GROUND WATER QUALITY AND QUANTITY.

- MANAGE THE DISPOSAL OF WASTES.

- ENSURE AN ADEQUATE QUALITY OF DRINKING WATER, AND

- CONTROL THE USE OF PESTICIDES.

THE DIVISION CONSISTS OF SIX REGIONS AND ONE HEAD OFFICE BRANCH:

- NORTHEASTERN REGION.
- NORTHWESTERN REGION.
- SOUTHWESTERN REGION.
- WEST CENTRAL REGION.
- CENTRAL REGION.
- SOUTHEASTERN REGION.
- ENVIRONMENTAL APPROVALS AND PROJECT ENGINEERING BRANCH.

THE RESPONSIBILITIES OF THE REGIONS ARE TO:

- ADMINISTER PROGRAMS FOR THE REGULATION OF POLLUTION SOURCES.

- ADMINISTER REGULATIONS FOR THE PROPER CONSTRUCTION AND OPERATION OF WATER WELLS.

- ADMINISTER PLANS AND POLICIES FOR THE PROPER DEVELOPMENT, OPERATION AND CLOSURE OF WASTE DISPOSAL SITES AND THE PROPER OPERATION OF WASTE MANAGEMENT SYSTEMS.

- MANAGE AND OPERATE MINISTRY WATER AND SEWER PLANTS AND SYSTEMS.

- MONITOR THE QUALITY OF THE NATURAL ENVIRONMENT.

- RESPOND TO PUBLIC COMPLAINTS AND ENVIRONMENTAL EMERGENCIES.

- REVIEW LAND-USE PLANS IN ORDER TO ENCOURAGE ENVIRONMENTAL SAFEGUARDS IN LAND DEVELOPMENT.

- EVALUATE ENVIRONMENTAL ASSESSMENTS OF PROPOSED UNDERTAKINGS AND MONITOR ENVIRONMENTAL ASSESSMENT CONDITIONS.

- ADMINISTER REGULATORY PROGRAMS FOR WATER USE TO PROVIDE FOR A FAIR SHARING OF AVAILABLE RESOURCES AND MAINTENANCE OF WATER SUPPLIES.

- MONITOR AND INVESTIGATE DISCHARGES TO THE ENVIRONMENT.

- CONTRIBUTE TO WATER MANAGEMENT PLANS WHICH WILL ALLOW FOR MULTIPLE WATER USES.

- ADMINISTER PROGRAMS FOR THE CONTROL OF NOISE.

THE ENVIRONMENTAL APPROVALS AND PROJECT ENGINEERING BRANCH HAS A MULTIPLE ROLE, TO:

- REVIEW AND PROCESS APPLICATIONS REQUIRED UNDER THE ENVIRONMENTAL PROTECTION ACT, AND THE ONTARIO WATER RESOURCES ACT.

- PROMOTE THE CONSIDERATION OF THE ENVIRONMENT IN LAND-USE POLICIES AND PROGRAMS.

- ENCOURAGE THE DEVELOPMENT OF A WATER SUPPLY AND SEWAGE TREATMENT INFRASTRUCTURE THROUGH THE PROVISION OF FINANCIAL, ENGINEERING AND CONSTRUCTION ASSISTANCE TO MUNICIPALITIES.

THE OBJECTIVES OF THE ENVIRONMENTAL APPROVALS AND PROJECT ENGINEERING BRANCH ARE TO:

- REVIEW APPLICATIONS FOR THE APPROVAL OF AIR EMISSIONS, NOISES, AND WASTEWATER DISCHARGES.

- REVIEW APPLICATIONS FOR THE APPROVAL OF PROPOSED MUNICIPAL WATER TREATMENT SYSTEMS.

- REVIEW APPLICATIONS FOR THE APPROVAL OF PROPOSED MUNICIPAL AND INDUSTRIAL WASTE MANAGEMENT SITES AND SYSTEMS.

- ADMINISTER LICENSING AND PERMIT ISSUING FUNCTIONS RELATING TO WATER USE.

- REVIEW REQUESTS FROM MUNICIPALITIES FOR THE SUPPORT OF WATER AND SEWAGE WORKS AND TO PROVIDE PROJECT MANAGEMENT AND ENGINEERING SERVICES WHERE NECESSARY.

- CO-ORDINATE ENVIRONMENTAL COMMENTS ON LAND-USE PLANNING ACTIVITIES AND LAND-USE POLICIES.

THE REORGANIZATION OF MY MINISTRY, WHICH I
HAVE DESCRIBED IN CONSIDERABLE DETAIL, DEMONSTRATES
MY DETERMINATION TO FULFILL OUR MANDATE OF
PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT AND TO
MEET THE DIFFICULT CHALLENGES OF THE 1980s.

BLUEPRINT FOR WASTE MANAGEMENT

LAST NOVEMBER, I SET OUT A CHALLENGE FOR MY MINISTRY, THE WASTE MANAGEMENT INDUSTRY AND THE PEOPLE OF ONTARIO -- ONE OF THE CHALLENGES OF THE 1980s.

THAT CHALLENGE IS BETTER MANAGEMENT OF THE EIGHT MILLION TONS OF SOLID WASTE AND THE SIXTY MILLION GALLONS OF INDUSTRIAL WASTE WE GENERATE EVERY YEAR.

I ANNOUNCED THEN MY COMMITMENT TO A COMPREHENSIVE REVIEW AND OVERHAUL OF WASTE MANAGEMENT PRACTICES, POLICIES, CONTROL AND LEGISLATION IN ONTARIO.

THE MAJOR INSTRUMENT IN THIS REVIEW AND OVERHAUL WAS TO BE OUR **BLUEPRINT FOR WASTE MANAGEMENT**. IN MAKING MY ANNOUNCEMENT, I INVITED THE PEOPLE OF ONTARIO TO CONTRIBUTE THEIR IDEAS TO THE FORMULATION OF THIS IMPORTANT DOCUMENT.

ONTARIO'S BLUEPRINT FOR WASTE MANAGEMENT IS NOW ON THE TABLE AND OPEN FOR DISCUSSION.

OUR RESEARCH AND THE INFORMATION CONTRIBUTED FROM NON-GOVERNMENT SOURCES HAVE CONFIRMED SOME OF MY PERSONAL CONCERNS AND PRIORITIES. FIRST AND FOREMOST OF THESE IS THE SHEER QUANTITY OF WASTE WE GENERATE.

THERE IS NO ROOM FOR DOUBT IN MY MIND THAT THERE IS JUST TOO MUCH WASTE -- FOUR AND A HALF POUNDS OF GARBAGE PER PERSON PER DAY AND TONS OF SOLID AND LIQUID INDUSTRIAL WASTE, ALL OF WHICH REQUIRE FACILITIES FOR SAFE TREATMENT AND DISPOSAL.

THE FOUR RS OF WASTE MANAGEMENT -- REDUCTION, REUSE, RECOVERY AND RECYCLING -- MUST AND WILL BE A MAJOR PART OF WASTE MANAGEMENT IN OUR PROVINCE.

THERE HAVE BEEN VARIOUS EFFORTS TO APPLY ONE OR MORE OF THE FOUR RS TO CONSERVE OR RECLAIM VARIOUS WASTES. I HOPE THE EXPERIENCE GAINED BY THE ORIGINATORS OF THESE EFFORTS CAN BE SHARED TO MUTUAL BENEFIT THIS YEAR AS WE WORK TOGETHER TO PLAN AND ESTABLISH ONTARIO'S FUTURE WASTE MANAGEMENT.

I WOULD LIKE YOU TO LOOK AT EACH OF THE FOUR RS IN TURN. REDUCTION, REUSE, RECOVERY AND RECYCLING REPRESENT THE GREATEST CHALLENGES WE FACE IN BRINGING NEW LIFE TO WASTE MANAGEMENT IN THIS PROVINCE.

AT THE SAME TIME, I BELIEVE THEY PRESENT US WITH SOME OF THE MOST EXCITING OPPORTUNITIES.

REDUCTION:

THE REDUCTION OF WASTE CALLS FOR SOME FIRST-RATE THINKING AND DECISION-MAKING BY A NUMBER OF SECTORS IN OUR SOCIETY. FOR EXAMPLE, INDUSTRY AND BUSINESS HAVE ROLES TO PLAY IN WASTE REDUCTION. ECONOMIC CONSIDERATIONS HAVE COMPELLED US ALL TO REORIENT OUR OPERATIONS TO ACCOMPLISH MORE WITH LESS. MEANWHILE YOUR CUSTOMERS, THE CONSUMERS OF ONTARIO, ARE SPENDING MORE CAREFULLY AND WISELY.

NOW IS THE TIME TO INCREASE THE DURABILITY AND REPAIRABILITY OF PRODUCTS. NOW IS THE TIME TO MODIFY OUR PACKAGING TO ELIMINATE MATERIALS WHICH PROVIDE OBSTACLES TO RECYCLING.

AND NOW IS THE TIME, THROUGH MORE EFFECTIVE GOVERNMENT AND NON-GOVERNMENT COMMUNICATIONS, TO CHANGE CONSUMER HABITS AND REDUCE THE FLOW OF WASTE. OUR TIMING COULD NOT BE BETTER.

REUSE:

DURABILITY IS A MAJOR FACTOR IN ANOTHER OF THE FOUR Rs, -- REUSE. THERE IS A HOST OF MECHANISMS IN PLACE FOR THIS.

ON THE CONSUMER LEVEL, FOR EXAMPLE, REFILLABLE GLASS CONTAINERS FOR BEER ARE REUSED AN AVERAGE OF 20 TIMES, AFTER WHICH THE GLASS MAY BE RECYCLED BY MELTING IT DOWN TO EMERGE AS ANOTHER REFILLABLE CONTAINER.

IF WE ARE TO EXPAND REUSE, WE MUST LOOK TO DURABILITY IN GOODS AND MATERIALS AND CAREFUL MAINTENANCE OF THEIR QUALITIES, TO ENSURE THEIR VALUE TO THE NEXT USER AND THOSE WHO FOLLOW.

RECOVERY:

THE THIRD R IN OUR REVIEW IS RECOVERY -- THE PROCESSING OF WASTE TO RECLAIM MATERIAL TO PRODUCE ENERGY.

ONTARIO HAS ACHIEVED A REALISTIC PERSPECTIVE ON THE COSTS OF PROCESSING WASTES THROUGH OUR EXPERIMENTAL PLANT FOR RESOURCE RECOVERY IN DOWNSVIEW. AND THE MINISTRY OF ENERGY HAS JOINED US IN THE WASTE RECOVERY FIELD WITH A NUMBER OF ENERGY-FROM-WASTE PROJECTS.

MY MINISTRY WILL PLAY A LEAD ROLE IN THE WASTE RECOVERY FIELD, ENCOURAGING BROADER APPLICATION OF RECOVERY TECHNOLOGY, CLOSE SCRUTINY OF FACILITIES AND SUPPORT FOR THE DEVELOPMENT OF SUCH PROJECTS ON A MUNICIPAL LEVEL.

IN ADDITION, I INTEND TO INVESTIGATE THE POSSIBILITY OF A GOOD PACKAGING SEAL OF APPROVAL TO BE DEVELOPED AND JOINTLY ENDORSED BY THE MINISTRY AND INDUSTRY.

I PROPOSE A SIMILAR LEADERSHIP ROLE FOR THE PROVINCE IN CO-ORDINATING PROMOTIONAL EFFORTS FOR MUNICIPALITIES, INDUSTRIES AND RECYCLING GROUPS.

MY MINISTRY IS ALSO PREPARED TO WORK WITH CONCERNED PUBLIC AND PRIVATE SECTOR GROUPS TO ESTABLISH STANDARDS FOR PRODUCTS CONTAINING RECYCLED MATERIALS.

RECYCLING:

RECYCLING IS THE BEST KNOWN OF THE FOUR Rs.

IT RANGES IN SCOPE FROM THE NEIGHBORHOOD BOY SCOUT PAPER DRIVE TO THE INDUSTRIAL EXCHANGE OF THOUSANDS OF GALLONS OF CHEMICALS.

WHILE IT WORKS WELL IN LIMITED COMMERCIAL AND INDUSTRIAL AREAS, ITS POTENTIAL HAS BARELY BEEN TAPPED. IT IS AN AREA WITH ROOM FOR WHOLEHEARTED INVOLVEMENT ON THE PART OF EVERY SECTOR OF OUR SOCIETY.

THE HOUSEHOLDER AND SHOPKEEPER HAVE THE OPPORTUNITY TO SEPARATE THE MARKETABLE MATERIALS FROM THEIR GARBAGE.

THE MUNICIPAL ROLE IS TO CO-ORDINATE COLLECTION OF THESE MATERIALS.

COMMERCE AND INDUSTRY HAVE AN INNER CIRCLE OF RECYCLING WHICH IS ESSENTIALLY STABLE. THE CHALLENGE TO THESE SECTORS IS TO EXPAND INTO THE LARGER COMMUNITY CYCLE AND WORK TO ESTABLISH PRODUCTIVE USES AND STABLE MARKETS FOR A BROADER ASSURED SUPPLY OF MATERIALS.

AND THE RECYCLING WHEEL TURNS FULL CIRCLE TO THE INDIVIDUAL WHO HAS THE POWER TO DEMAND GOODS MADE WITH RECYCLED MATERIALS.

WITHIN THIS RECYCLING CIRCLE WE HAVE THE NON-GOVERNMENT, ENVIRONMENTALLY ORIENTED SPECIAL INTEREST GROUPS. THEY HAVE ESTABLISHED A ROLE FOR THEMSELVES IN PROVIDING EDUCATION, INITIATIVE, IMAGINATION AND THE SPIRIT TO MAKE RECYCLING WORK.

THE CHALLENGE FOR THESE GROUPS IS ESSENTIALLY TO DO BETTER -- TO SHARE THEIR IMAGINATION AND SPIRIT WITH INDUSTRY, FOR EXAMPLE, AND IN RETURN LEARN FROM INDUSTRY'S EXPERIENCE AND PRACTICALITY.

THE CHALLENGE FOR GOVERNMENT IS, QUITE SIMPLY, TO MAKE IT WORK. IN OUR BLUEPRINT WE SET OUT SOME IDEAS ON WHAT WE ARE DOING AND CAN DO.

WE PROVIDE SEED MONEY TO START AND STABILIZE REGIONAL SOURCE SEPARATION PROGRAMS. WITHIN THE ONTARIO GOVERNMENT, WE HAVE IMPLEMENTED A COST-EFFECTIVE SOURCE SEPARATION PROGRAM FOR FINE PAPER AND MADE A GOOD START ON ENCOURAGING SIMILAR PROGRAMS IN THE PRIVATE SECTOR.

WE HAVE BEEN WORKING STEADILY ON PUBLIC EDUCATION AND WE INTEND TO DO MORE IN THIS AREA.

I AM ASKING FOR RESPONSE FROM ALL SECTORS OF ONTARIO SOCIETY ON HOW MY MINISTRY AND I CAN MOST EFFECTIVELY CONTRIBUTE TO SUBSTANTIAL AND STABLE SUPPLIES OF RECYCLABLE MATERIALS, AN EFFECTIVE SYSTEM OR SYSTEMS FOR THEIR COLLECTION AND DELIVERY AND AN ASSURED MARKET FOR THEIR USE.

AND I AM CHALLENGING ALL SECTORS OF ONTARIO SOCIETY TO FIND WAYS OF MAKING THEIR OWN SUBSTANTIAL CONTRIBUTION TO THESE ENDS.

MY STAFF IS INVESTIGATING THE INTRICACIES OF GOVERNMENT PURCHASING AND I AM GOING TO SEE WHAT I CAN DO ABOUT INCREASING GOVERNMENT DEMAND FOR RECYCLED CONTENT ACROSS THE BOARD.

A DISPOSAL FEE?

BEYOND THIS, I WOULD LIKE TO PROPOSE FOR DISCUSSION THE POSSIBILITY OF A DISPOSAL FEE TO BE LEVIED AT ALL TREATMENT AND DISPOSAL FACILITIES AGAINST ALL WASTES RECEIVED. THIS FEE MIGHT WELL BE HIGHER FOR THE MORE COMPLEX AND HAZARDOUS WASTES.

THE REVENUE FROM THIS COULD BE APPLIED TO OFFSET SOME OF THE CAPITAL COSTS OF PROCESSING FACILITIES AND TO PROVIDE FUNDING FOR SOURCE SEPARATION, EDUCATION AND DEMONSTRATION PROJECTS RELATED TO THE FOUR Rs.

THIS FEE COULD HAVE A SIGNIFICANT IMPACT ON WASTE MANAGEMENT PRACTICES. FIRST AND FOREMOST, IT WOULD GENERATE FUNDING FOR THE FOUR Rs.

EQUALLY IMPORTANT, IT WOULD CLOSE THE COST GAP BETWEEN THE SIMPLE DUMPING SOLUTION AND THE ALTERNATIVES OF REDUCTION, REUSE, RECOVERY AND RECYCLING.

THE WHOLE QUESTION OF COST EFFECTIVENESS IN WASTE MANAGEMENT CONCERNS ME AND, FROM WHAT I HAVE BEEN ABLE TO GATHER, IT CONCERNS AN INCREASING NUMBER OF INFORMED PEOPLE IN ONTARIO.

ALL TOO OFTEN, I BELIEVE, WE ARE TAKING TOO SUPERFICIAL AN ACCOUNTING OF THE REAL COSTS OF WASTE DISPOSAL. IT IS AN ACCEPTED MAXIM THAT LANDFILL IS THE CHEAPEST METHOD OF DISPOSING WASTES WHETHER THEY BE SOLID OR LIQUID, MUNICIPAL, COMMERCIAL OR INDUSTRIAL.

BUT HOW REALISTIC IS THAT MAXIM? DO WE REALLY COUNT ALL THE COSTS? COMPREHENSIVE WASTE MANAGEMENT ACCOUNTING IN OUR PLANNING WILL ALLOW US MORE RESPONSIBLE AND EFFICIENT CHOICES OF FUTURE WASTE MANAGEMENT OPTIONS.

LANDFILL:

LANDFILLING, FOR INSTANCE, IS NOT ALWAYS THE INEXPENSIVE AND SIMPLE SOLUTION SOME PEOPLE MAY THINK IT IS.

THE TRUE COSTS OF LANDFILLING INCLUDE PLANNING, TECHNICAL STUDIES OF ALTERNATIVE SITES, HEARINGS AND APPROVALS, LAND ACQUISITION, OPERATING COSTS, MONITORING, LEACHATE AND RUNOFF CONTROLS, CLOSURE AND POST-CLOSURE PROTECTIVE MEASURES.

CUTTING CORNERS IN ANY OF THESE AREAS INCREASES THE RISKS TO OUR HEALTH AND OUR ENVIRONMENT AND ALSO INCREASES THE ULTIMATE COSTS TO THE COMMUNITY.

PLANNING:

WASTE MANAGEMENT BEGINS WITH PLANNING AND THIS IS AN AREA WHERE THE TEMPTATION IS GREATEST FOR SOME MUNICIPALITIES TO TAKE SHORT CUTS IN THE INTERESTS OF EXPEDIENCY.

THERE ARE SEVERAL MUNICIPALITIES WHICH ASSUME A DEGREE OF RESPONSIBILITY FOR ALL WASTES PRODUCED IN THEIR JURISDICTION AND FOR LONG-TERM AREA WASTE MANAGEMENT PLANNING TO COPE WITH THESE WASTES. HOWEVER, THIS IS NOT THE CASE WITH ALL MUNICIPALITIES -- BUT I INTEND TO ENSURE THAT IT WILL BE.

MUNICIPALITIES MUST STRIVE FOR A BETTER QUALITY IN WASTE MANAGEMENT PLANNING, INCORPORATING MORE CONSTRUCTIVE PUBLIC CONSULTATION TO REDUCE THE ATMOSPHERE OF CONFLICT WHICH PREVAILS IN SO MANY WASTE SITE DECISIONS TO DATE.

PERPETUAL CARE

ANOTHER AREA TO WHICH WE HAVE TURNED OUR ATTENTION IS THE FEAR PRESENT IN THE MINDS OF THE PUBLIC THAT BURIED WASTES WILL SOME DAY RETURN TO HAUNT US. WE ARE THEREFORE PROPOSING A PERPETUAL CARE PROGRAM TO ENSURE THAT ANY PROBLEMS ARISING CAN BE SAFELY AND EFFICIENTLY RESOLVED.

IN THIS PERPETUAL CARE PROGRAM, WE ARE DEVELOPING A GUARANTEED PROTECTION PLAN WHICH PROVIDES FINANCIAL ASSURANCES TO COVER EVERY STAGE OF THE LIFE OF A SITE AND CONTINUING INSURANCE AFTER ITS CLOSURE.

ENFORCEMENT:

IN OUR LEADERSHIP ROLE WITH RESPECT TO CONTROL MEASURES, REGULATIONS AND ASSIGNMENTS OF RESPONSIBILITY, MY MINISTRY ALSO RECOGNIZES A CLEAR NEED TO ENSURE CONSISTENT PERFORMANCE ON THE PART OF ALL RESPONSIBLE PARTIES.

I HAVE JUST REVIEWED A QUARTERLY STATUS REPORT ON ENFORCEMENT AND I CAN REPORT THAT WE HAVE 111 CONTROL ORDERS, REQUIREMENTS AND DIRECTIONS AND CONTROL PROGRAMS TO ENSURE CONSISTENT PROGRESS IN DEALING WITH SPECIFIC ENVIRONMENTAL PROBLEMS.

IN ADDITION, MY MINISTRY'S LEGAL STAFF IS MAINTAINING A FULL SLATE OF ACTIVITY WITH INCREASING EMPHASIS ON WASTE MANAGEMENT ISSUES.

THE REGULATIONS WE PRODUCE FROM THIS BLUEPRINT PROCESS **WILL BE ENFORCED**. I INTEND TO BE FAIR, BUT I ASSURE YOU THAT OUR ENFORCEMENT WILL BE FIRM.

RESPONSIBILITY:

WHILE PROTECTIVE MEASURES ARE AN IMPORTANT ELEMENT IN WASTE MANAGEMENT, THERE ARE MORE POSITIVE ELEMENTS TO OUR BLUEPRINT WHICH RELATE TO PERFORMANCE.

WE HAVE SET OUT TO DEFINE ALL ASPECTS OF WASTE MANAGEMENT IN TERMS OF ROLES AND RESPONSIBILITY COUPLED WITH ACCOUNTABILITY.

PERFORMANCE HINGES ON A CLEAR, MUTUAL UNDERSTANDING OF OUR RESPECTIVE RESPONSIBILITIES AND THE ROLES OF OTHER SECTORS OF OUR SOCIETY.

THE ROAD AHEAD:

WE WANT THE PUBLIC TO COMMENT, TO CRITICIZE AND TO CONTRIBUTE.

OVER THE NEXT FEW MONTHS, MY STAFF AND I WILL BE TALKING TO AND LISTENING TO AS MANY GROUPS AND INTERESTS ACROSS ONTARIO AS POSSIBLE. WE WILL BE CONDUCTING AN ACTIVE CAMPAIGN TO GET PEOPLE INVOLVED IN THE WASTE MANAGEMENT DECISIONS WHICH MUST BE MADE TO COMPLETE THE BLUEPRINT.

THIS WILL BE FOLLOWED BY A SERIES OF PUBLIC MEETINGS AT WHICH MY MINISTRY'S BLUEPRINT TEAM WILL RECEIVE AND HEAR FURTHER SUBMISSIONS IN DETAIL.

THEN, AND ONLY THEN, WE WILL TAKE ALL THE CONTRIBUTIONS FROM ALL SEGMENTS OF OUR SOCIETY, TO FORGE THE FINAL WORKING PLAN FOR WASTE MANAGEMENT IN ONTARIO THROUGH THE 80S AND THE DECADES BEYOND.

AS WE ENTER 1984, THIS PLAN WILL TAKE FORM IN NEW LEGISLATION, REGULATIONS, PRACTICES AND WORKING RELATIONSHIPS.

THAT IS THE CHALLENGE -- WORKING TOGETHER FIRST TO PLAN, THEN TO IMPLEMENT, AND FINALLY TO MAINTAIN CONSISTENT PERFORMANCE.

OUR REWARD IS THE MAINTENANCE OF CLEAN, SAFE, HEALTHY COMMUNITIES IN A CLEAN, SAFE AND HEALTHFUL PROVINCE.

I NOW WISH TO GIVE PUBLIC RECOGNITION OF THE ENORMOUS DEBT WE OWE TO AN OUTSTANDING CITIZEN GROUP, THE WASTE MANAGEMENT ADVISORY BOARD. THIS BOARD, HAVING FULFILLED ITS MANDATE WITH GREAT DISTINCTION, HAS NOW BEEN DISCONTINUED.

THE WASTE MANAGEMENT ADVISORY BOARD HAS SERVED THIS MINISTRY WELL IN SEVERAL AREAS, MOST PROMINENTLY THROUGH ITS VARIOUS STUDIES OF BEVERAGE CONTAINERS AND PACKAGING. THIS VALUABLE WORK WAS DONE, I WOULD REMIND YOU, AT A TIME WHEN THE MINISTRY COULD BENEFIT FROM NEITHER THE WASTE MANAGEMENT BRANCH NOR THE ONTARIO WASTE MANAGEMENT CORPORATION. NOW THAT THESE ORGANIZATIONS ARE EFFECTIVELY IN PLACE, AND IN VIEW OF OUR CONTINUING BUDGETARY CONCERNS, IT IS NOW TIME TO REALLOCATE RESOURCES TO OTHER AREAS.

I WISH TO EXTEND TO RETIRING MEMBERS, FROM MYSELF AND ON BEHALF OF PRECEDING MINISTERS OF THE ENVIRONMENT, SINCERE THANKS FOR A JOB WELL DONE.

ACID RAIN

SINCE MY LAST APPEARANCE BEFORE THIS COMMITTEE, ONE YEAR AGO, WE HAVE MADE SUBSTANTIAL PROGRESS IN OUR WAR AGAINST ACID RAIN. OUR DETERMINATION TO WIN THE WAR REMAINS UNDIMINISHED.

WE HAVE SIGNED CO-OPERATIVE AGREEMENTS WITH THE STATE OF NEW YORK AND THE FEDERAL REPUBLIC OF GERMANY, AND WE HAVE NEW REASON FOR OPTIMISM IN EVENTS THAT ARE RE-SHAPING THE ENVIRONMENTAL PROTECTION AGENCY OF THE UNITED STATES.

IT'S BEEN A BUSY AND PRODUCTIVE YEAR, WITH THE ONTARIO MINISTRY OF THE ENVIRONMENT WELL IN THE FOREFRONT OF ACTIVITY. I HAVE FOR YOU TODAY A CATALOGUE OF ACCOMPLISHMENTS, AND A SOLID INDICATION OF WHERE OUR WORK IS LIKELY TO TAKE US IN THE NEXT YEAR.

IN JUNE OF LAST YEAR THE ACID RAIN ISSUE WAS THOROUGHLY EXAMINED AT AN INTERNATIONAL CONFERENCE IN STOCKHOLM. EXPERTS FROM 21 EUROPEAN NATIONS, THE UNITED STATES AND CANADA AGREED ON SEVERAL IMPORTANT POINTS.

THEY REACHED 29 CONCLUSIONS, WHICH CAN BE SUMMARIZED IN ONE SHORT STATEMENT:

"UNLESS WE REDUCE OUR EMISSIONS OF SULPHUR AND NITROGEN OXIDES, MORE LAKES AND STREAMS, MORE GROUND WATER, MORE SOILS AND FORESTS WILL BECOME ACIDIFIED AND WE WILL BE ADDING TO THE ECONOMIC AND ESTHETIC DAMAGE WE HAVE ALREADY DONE."

THIS WAS A PROFOUND CONCLUSION, AND WE ARE GRATEFUL FOR IT. IT REFLECTS WITH GREAT ACCURACY THE POSITION ONTARIO HAS ADVANCED CONSISTENTLY, AND SOMETIMES AGAINST POWERFUL OPPOSITION, SINCE WE FIRST DEFINED THE PROBLEM AND BEGAN WORKING TOWARD ITS SOLUTION IN THE MID-1970s.

AS PART OF ITS ACID RAIN PROGRAM, ONTARIO HAS BEEN OPERATING, FOR MORE THAN TWO YEARS NOW, AN EXTENSIVE ACID DEPOSITION MONITORING NETWORK, ONE OF THE MOST ADVANCED OF ITS KIND IN NORTH AMERICA. BOTH WET AND DRY DEPOSITION OF ATMOSPHERIC ACIDS, AND RELATED SUBSTANCES, ARE MEASURED, SINCE ACIDITY COMES DOWN NOT ONLY WITH THE RAIN, BUT ALSO THROUGH ABSORPTION OF GASES AND PARTICLES BY VEGETATION, WATER BODIES AND OTHER SURFACES.

TO MONITOR WET DEPOSITION, WE ARE USING SPECIAL SAMPLERS, WHICH OPEN ONLY WHEN IT IS RAINING OR SNOWING, AT MORE THAN 50 SITES ACROSS THE PROVINCE. THE PRECIPITATION IS ANALYZED FOR ACIDS AND RELATED SUBSTANCES (SUCH AS SULPHATES AND NITRATES), NEUTRALIZERS OF ATMOSPHERIC ACIDITY (AMMONIA, CALCIUM, ETC.), AND VARIOUS TRACE METALS.

EXPLORATORY EXPERIMENTS ARE ALSO UNDER WAY TO DETERMINE THE DEPOSITION OF MERCURY, PESTICIDES, PCBs, AND OTHER ORGANIC CONTAMINANTS IN PRECIPITATION. AN ANALYSIS OF THE AVAILABLE DATA HAS SHOWN THAT WET DEPOSITION OF ACIDITY, SULPHATES AND NITRATES IS GREATEST IN SOUTHERN ONTARIO.

IN 1981, FOR EXAMPLE, WET SULPHATE LOADINGS IN EXCESS OF 20 KILOGRAMS PER HECTARE PER YEAR, WHICH IS THOUGHT BY OUR SCIENTISTS TO BE CRITICAL FOR SENSITIVE WATER BODIES, WERE OCCURRING IN ALL OF THE SOUTHERN PORTION OF THE PROVINCE (SOUTH OF 46 DEGREES NORTH LATITUDE). IN THIS SAME AREA, PRECIPITATION PH VALUES WERE GENERALLY LESS THAN 4.6, INDICATING AN ACID CONTENT MORE THAN 10 TIMES THAT EXPECTED FOR CLEAN WATER IN EQUILIBRIUM WITH ATMOSPHERIC CARBON DIOXIDE.

A METEOROLOGICAL ANALYSIS OF THE DATA INDICATES THAT AT LEAST 50 PER CENT OF THE WET DEPOSITION OF ACIDIC SUBSTANCES IN 1981 WAS ASSOCIATED WITH AIR FLOWS FROM ONE QUADRANT - THAT BETWEEN THE SOUTH AND WEST COMPASS DIRECTIONS. AIR MASSES REACHING SOUTHERN AND CENTRAL ONTARIO FROM THIS QUADRANT HAVE PASSED OVER HEAVILY INDUSTRIALIZED AREAS IN THE U.S.A. AND ONTARIO HAVING HIGH EMISSION RATES OF SULPHUR AND NITROGEN OXIDES.

DRY DEPOSITION ACROSS THE PROVINCE IS INFERRED FROM THE AIR CONCENTRATION OF SULPHUR AND NITROGEN COMPOUNDS, AS WELL AS A NUMBER OF TRACE METALS. AN ESPECIALLY-DESIGNED AIR MONITORING NETWORK MEASURES THESE SUBSTANCES AT 27 SITES ACROSS THE PROVINCE.

INTERPRETATION OF THE DATA FROM THIS NETWORK IS STILL AT AN EARLY STAGE, BUT PRELIMINARY RESULTS INDICATE THAT, IN SOUTHERN ONTARIO, DRY DEPOSITION OF ACIDIC SUBSTANCES, SUCH AS SULPHATES, IS COMPARABLE IN MAGNITUDE TO WET DEPOSITION, WHILE IN NORTHERN ONTARIO, MOST OF THE ATMOSPHERIC ACIDITY IS DELIVERED BY PRECIPITATION.

ANALYSIS OF THE DATA FROM THESE NETWORKS IS AN ONGOING ACTIVITY OF THE MINISTRY'S SCIENTISTS. A NUMBER OF REPORTS HAVE ALREADY BEEN PUBLISHED. SEVERAL MORE ARE IN PREPARATION INCLUDING A JOINT PROJECT, WITH ENVIRONMENT CANADA AND THE MINISTRY OF THE ENVIRONMENT OF QUEBEC, TO ASSESS THE IMPACT OF THE SUDBURY SMELTERS ON ACIDIC DEPOSITION BY COMPARING DATA OBTAINED DURING THE RECENT PERIOD WHEN THE SMELTERS WERE SHUT DOWN, WITH CORRESPONDING DATA WHEN THE SMELTERS WERE OPERATING.

SUCH DEPOSITION MONITORING AND DATA ANALYSIS ACTIVITIES ARE EXPECTED TO CONTINUE FOR SEVERAL YEARS TO COME, TO DETERMINE CHANGES ACCOMPANYING EMISSION CONTROLS THAT WILL BE INSTITUTED IN ONTARIO AND ALL OF CANADA AND WE HOPE WILL BE INSTITUTED IN THE UNITED STATES.

IN NOVA SCOTIA, ANOTHER PROVINCE AFFECTED BY ACID RAIN, MANY RIVERS NO LONGER SUPPORT SALMON.

IT IS ESTIMATED THAT IN THE UNITED STATES SOME 36,000 SQUARE KILOMETERS OF SURFACE WATER ARE RECEIVING EXCESSIVE AMOUNTS OF ACID RAIN.

ELSEWHERE, THERE IS EVIDENCE THAT ACIDIC DEPOSITION LEADS TO THE REMOVAL OF IMPORTANT PLANT NUTRIENTS AND THE RELEASE OF TOXIC METALS FROM THE SOILS WHICH THUS THREATEN FORESTS. TOXIC METALS HAVE BEEN TRACED FROM SOILS TO GROUND WATER AND EVENTUALLY TO STREAMS.

IN GERMANY, SCIENTISTS BELIEVE THE MOBILIZATION OF METALS IN FOREST SOILS RESULTING FROM ACID PRECIPITATION IS CAUSING DIEBACK IN THEIR FORESTS.

THE RECENTLY-RELEASED FINAL REPORTS OF THE CANADA-UNITED STATES WORK GROUPS, ESTABLISHED UNDER THE 1980 MEMORANDUM OF INTENT, PROVIDE THE MOST UP-TO-DATE SCIENTIFIC INFORMATION ON ACID RAIN.

WHILE NOT ALL OF THE MEMBERS OF THE WORK GROUPS AGREED ON ALL POINTS, A NUMBER OF CONCLUSIONS CAN BE DRAWN FROM THE MEMORANDUM OF INTENT REPORTS:

- THERE IS DAMAGE IN BOTH THE SHORT AND LONG TERM TO AREAS VULNERABLE TO ACID RAIN AS A RESULT OF SULPHUR DEPOSITION.

- WET SULPHATE DEPOSITION ABOVE 20 KILOGRAMS PER HECTARE PER YEAR (OR 18 POUNDS PER ACRE) IN VULNERABLE AREAS IS ASSOCIATED WITH DAMAGE. AREAS WITH DEPOSITION OF LESS THAN 17 KILOGRAMS PER HECTARE PER YEAR HAVE NO RECORDED DAMAGE.

- THE DAMAGE IS CAUSED BY SULPHUR DEPOSITION AND THE SOLUTION IS TO REDUCE IT.

- ACID RAIN FALLS ON EASTERN NORTH AMERICA IN AND DOWNWIND FROM THE MAJOR INDUSTRIAL REGIONS.

- TECHNOLOGY EXISTS TO REDUCE EMISSIONS BY SUBSTANTIAL AMOUNTS.

IN ORDER TO DETERMINE THE MAGNITUDE AND EXTENT OF THE THREAT OF ACID RAIN TO SURFACE WATERS IN ONTARIO, MY MINISTRY IS CONTINUING WITH THE SURVEY OF ACID SENSITIVITY STATUS. THE THIRD ANNUAL SUMMARY OF THIS PROGRAM WILL BE AVAILABLE TO THE PUBLIC IN A MATTER OF WEEKS IN THE FORM OF FACT SHEETS.

THE PROGRAM IS AN ONGOING SURVEY OF THE SUSCEPTIBILITY OF LAKES IN ONTARIO TO ACID RAIN, BASED ON CHEMICAL ANALYSES OF WATER SAMPLES TAKEN FROM EACH LAKE. OUR DATA BASE HAS NOW INCREASED TO 4,016 LAKES, UP FROM 2,619 IN 1982.

THE PRIMARY FACTOR IN DETERMINING THE SENSITIVITY OF A LAKE TO ACIDIFICATION IS ITS ALKALINITY, A MEASURE OF ITS NATURAL, ACID-NEUTRALIZING CAPACITY. WE HAVE CLASSIFIED LAKES INTO FIVE CATEGORIES BASED ON THEIR ALKALINITY.

LEVEL ONE LAKES HAVE ZERO OR NEGATIVE ALKALINITY. THEY HAVE ALREADY BECOME ACIDIC AND MANY OR ALL FISH SPECIES MAY BE ABSENT FROM THESE LAKES. OF THE MORE THAN 4,000 LAKES ACTUALLY TESTED, 155 OR 4 PER CENT WERE IN THIS CATEGORY.

LEVEL TWO LAKES HAVE VERY LOW ALKALINITY AND ARE EXTREMELY SENSITIVE TO HEAVY ACID LOADINGS. FISH KILLS AND OTHER BIOLOGICAL DAMAGE MAY OCCUR IN THESE LAKES DURING SPRING RUNOFF. THIRTEEN PER CENT OF THE SURVEYED LAKES WERE IN THIS CATEGORY.

FORTY-ONE PER CENT OF THE LAKES WERE MODERATELY SENSITIVE, BEING LESS AT RISK IN COMPARISON TO LEVEL TWO LAKES, AND 18 PER CENT WERE CLASSED AS HAVING LOW SENSITIVITY. THESE LAKES ARE LIKELY TO EXPERIENCE BIOLOGICAL DAMAGE ONLY UNDER EXTREME SNOW-MELT CONDITIONS DURING SPRING RUNOFF.

So, A TOTAL OF 72 PER CENT OF THE 4,000 SURVEY LAKES SHOWED SOME SENSITIVITY TO ACIDIFICATION. THE REMAINING LAKES ARE CONSIDERED NOT SENSITIVE TO ACID LOADINGS BECAUSE THEY CONTAIN SUFFICIENT BUFFERING CAPACITY TO NEUTRALIZE ACID RAIN FOR AN INDEFINITE TIME PERIOD.

THIS PROGRAM, AS I HAVE SAID, IS CONTINUING WITH THE CO-OPERATION OF THE MINISTRY OF NATURAL RESOURCES AND UNIVERSITY RESEARCHERS. IT IS PROVIDING US WITH A DATA BASE FROM WHICH TO ASSESS THE EXTENT OF THE THREAT OF ACIDIFICATION TO OUR SURFACE WATERS.

MY MINISTRY HAS ALSO COMPLETED SURVEYS ON THE ACIDITY OF GROUND WATER IN THE MUSKOKA-HALIBURTON, SUDBURY, NORTH BAY AND TIMMINS AREAS OF THE PROVINCE. OVER 350 DOMESTIC WELLS WERE SAMPLED. RESULTS OF THESE SURVEYS INDICATED THAT WELL WATER WAS ACIDIC (PH 6.0) IN 5 PER CENT OF THE SUDBURY WELLS AND 12 PER CENT OF THOSE IN MUSKOKA-HALIBURTON.

HOWEVER, WHILE THE ACIDITY OF SURFACE WATERS IS LARGELY CAUSED BY ACIDIC DEPOSITION, GROUND WATER ACIDITY IS MORE COMMONLY THE RESULT OF NATURALLY-ACCUMULATING CARBONIC ACID -- FORMED FROM THE REACTION OF CARBON DIOXIDE IN THE SOIL WITH WATER.

HOWEVER, THIS MAY CHANGE IN THE FUTURE, AS SUGGESTED BY DATA FROM SWEDEN, WHERE IN SOME AREAS GROUND WATER PH VALUES OF LESS THAN 5 HAVE BEEN ATTRIBUTED TO ACIDIC PRECIPITATION.

IN ACIDIC WELL WATER IN BOTH MUSKOKA-HALIBURTON AND SUDBURY, THE DRINKING WATER OBJECTIVES FOR LEAD AND COPPER HAVE BEEN EXCEEDED. THIS OCCURS BECAUSE METALS FROM PIPING AND JOINTS ARE RELEASED IN THE ACIDIC WATER.

TO PUT THE MATTER IN PERSPECTIVE, OUR MEDICAL ADVISERS HAVE NOT SUGGESTED THE PRESENCE OF ANY MAJOR OR WIDESPREAD DANGER TO PUBLIC HEALTH. BUT THEY HAVE ADVISED DISCRETION. FOR INSTANCE, IT IS NOT ADVISABLE TO MIX BABY FORMULA WITH THE FIRST WATER TAKEN FROM A TAP THAT HAS NOT BEEN TURNED ON FOR SEVERAL DAYS.

MY MINISTRY HAS CIRCULATED TO NEWSPAPERS AND HEALTH UNITS IN AFFECTED AREAS A NOTICE URGING COTTAGERS DRAWING WATER FROM LAKES AND WELLS TO FLUSH THE TAPS BEFORE USE AS THIS REDUCES THE METAL LEVELS TO BELOW WATER QUALITY OBJECTIVES.

IN ADDITION TO DETERMINING THE EXTENT OF THE ACIDIFICATION PROBLEM IN SURFACE AND GROUNDWATER, MY MINISTRY HAS UNDERTAKEN A COMPREHENSIVE RESEARCH PROGRAM INTO THE MECHANISMS OF ACIDIFICATION.

THIS INFORMATION IS OBTAINED FROM INTENSIVE SAMPLING OF LAKES, STREAMS AND GROUNDWATER IN A RELATIVELY SMALL (ABOUT 10) NUMBER OF REPRESENTATIVE SYSTEMS CALLED CALIBRATED WATERSHEDS. TWO TO SEVEN YEARS OF DATA ARE AVAILABLE TO DATE ON THESE SYSTEMS AND A DETAILED PICTURE OF THE PHYSICAL, CHEMICAL AND BIOLOGICAL NATURE OF ACID-STRESSED LAKES IS EMERGING.

FOR EXAMPLE, SEVERAL IMPORTANT RESULTS ARISING FROM THIS WORK ARE THE FOLLOWING: SULPHUR DEPOSITION IS OF GREATER IMPORTANCE THAN NITROGEN DEPOSITION IN THE ACIDIFICATION OF LAKES; MOST OF THE ACIDIC INPUT TO LAKES AND STREAMS OCCURS DURING THE PERIOD OF SPRING MELT WITH RESULTANT SHORT-TERM DEPRESSIONS OF PH; ELEVATED LEVELS OF ALUMINUM IN SURFACE WATERS ARE ASSOCIATED WITH LOW PH AND ALUMINUM CAN REACH LEVELS SHOWN TO BE LETHAL TO FISH IN LABORATORY EXPERIMENTS.

INFORMATION FROM THE CALIBRATED WATERSHEDS IS BEING USED TO DEVELOP MATHEMATICAL EQUATIONS WHICH LINK THE DEPOSITION OF ACIDIC COMPOUNDS TO THE CHEMISTRY OF SURFACE WATERS. THE RELATIONSHIPS ESTABLISHED BY THE DETAILED STUDIES CAN BE EXTRAPOLATED TO LARGE NUMBERS OF LAKES FROM WHICH LESS COMPLETE DATA ARE AVAILABLE.

OF COURSE, IT IS THE BIOLOGICAL DAMAGE CAUSED BY ACIDIFICATION AND THE RESULTANT HIGH METAL LEVELS THAT ARE OF UPPERMOST IMPORTANCE. AS A RESULT OF OUR IN-HOUSE RESEARCH AND THAT DONE BY UNIVERSITIES, WE ARE GETTING A CLEARER PICTURE OF THE NATURE OF THIS DAMAGE. WE NOW KNOW THAT FISH KILLS HAVE BEEN OBSERVED IN ONE LAKE IN MUSKOKA AT THE TIME OF SPRING RUNOFF WHEN THE LAKE PH WAS LOW. HERE ARE SOME OTHER FINDINGS:

- COMPLETE LOSS OF FISH POPULATIONS HAS BEEN OBSERVED IN LAKES IN THE SUDBURY AREA CONCURRENT WITH A DECLINE IN LAKE PH.

- THE CONCENTRATIONS OF TRACE METALS SUCH AS MERCURY, LEAD AND CADMIUM ARE ELEVATED IN FISH IN LAKES OF LOW PH.

- A DECLINE IN THE BREEDING POPULATION OF SOME TYPES OF AMPHIBIANS HAS BEEN OBSERVED IN STREAMS WITH LOW PH.

- CHANGES HAVE BEEN OBSERVED IN THE OCCURRENCE AND ABUNDANCE IN ACID-STRESSED LAKES OF ZOOPLANKTON, A TINY FORM OF ANIMAL LIFE AND AN IMPORTANT LINK IN THE FOOD CHAIN.

- CHANGES HAVE BEEN OBSERVED IN THE OCCURRENCE OF ALGAL SPECIES IN ACID-STRESSED AND ACIDIC LAKES WHICH MAY BE DETRIMENTAL TO THE RECREATIONAL USE OF THE LAKES. FOR EXAMPLE, LAKES WITH REDUCED PH SUPPORT MORE FILAMENTOUS ALGAE ATTACHED TO THE LAKE BOTTOM. IN OTHER ACID-STRESSED LAKES, AN ALGA IS APPEARING WHICH CAUSES "ROTTEN CABBAGE" ODORS.

THE RESEARCH PROGRAM THAT MY MINISTRY HAS UNDERTAKEN IS COMPLEMENTARY TO THAT OF THE CANADIAN FEDERAL GOVERNMENT AND SIMILAR TO THOSE FOLLOWED IN THE U.S.A., SWEDEN AND NORWAY. THE RESULTS ARE WELL-RESPECTED, AND THE WORK HAS BEEN PRESENTED AT NUMEROUS CONFERENCES AND APPEARED IN MANY SCIENTIFIC PUBLICATIONS.

TAKEN TOGETHER WITH THE SURVEY DATA, INFORMATION FROM THE CALIBRATED WATERSHEDS WILL BE USED AS A DATA BASE FROM WHICH ABATEMENT STRATEGIES TO HALT ACID RAIN ARE FASHIONED.

FOR EXAMPLE, THE RESULTS REGARDING THE RELATIVE CONTRIBUTION OF SULPHUR AND NITROGEN DEPOSITION TO ACIDIFICATION HAVE DEFINITE IMPLICATIONS FOR ABATEMENT STRATEGIES.

ONTARIO'S POSITION HAS BEEN THAT REDUCTIONS IN ACID RAIN SHOULD BE CARRIED OUT BY EMISSION CONTROL AT THE SOURCE. HOWEVER, WE HAVE ALSO UNDERTAKEN JOINT INVESTIGATIONS WITH THE MINISTRY OF NATURAL RESOURCES REGARDING THE FEASIBILITY AND EFFECTS OF ARTIFICIAL NEUTRALIZATION OF ACIDIC AND ACID-STRESSED LAKES.

THREE LAKES HAVE BEEN SELECTED FOR THE EXPERIMENT, ONE NEAR SUDBURY AND TWO IN THE PARRY SOUND AREA. THE LAKES HAVE BEEN MONITORED FOR THE PAST YEAR TO OBTAIN BACKGROUND DATA AND ONE WILL BE TREATED WITH NEUTRALIZING CHEMICALS IN AUGUST, 1983.

THIS PROGRAM, AS I HAVE SAID, IS CONTINUING. IT IS PROVIDING US WITH A DATA BASE -- OR POSITION OF STRENGTH, IF YOU LIKE -- FROM WHICH TO FASHION THE ABATEMENT STRATEGIES NECESSARY TO REMOVE THE THREAT.

THAT IS THE ANSWER, AS WE HAVE ALWAYS CONTENDED: CUT OFF THE SOURCE. OUR OWN RECORD IN ONTARIO, IN THAT REGARD, IS EXEMPLARY. WE HAVE BEEN PRACTISING WHAT WE HAVE BEEN PREACHING. I'LL COME TO THAT IN A MOMENT.

ANOTHER IMPORTANT CONTRIBUTION TO OUR GROWING KNOWLEDGE OF ACID RAIN, ITS CAUSES AND EFFECTS, WAS THE SUDBURY ENVIRONMENTAL STUDY RELEASED LATE LAST YEAR.

THIS STUDY, CONDUCTED BY MY MINISTRY BETWEEN 1973 AND 1980, DELINEATES THE CAUSAL RELATIONSHIP BETWEEN SMELTER EMISSIONS AND ENVIRONMENTAL DEGRADATION IN THE SUDBURY AREA.

IT CONFIRMED THAT EMISSIONS FROM MORE THAN 90 YEARS OF SMELTING OPERATIONS HAD RESULTED IN SERIOUS DAMAGE TO BOTH AQUATIC AND TERRESTRIAL ECOSYSTEMS IN THE SUDBURY AREA.

THE STUDY ALSO DETERMINED THAT, WHILE REDUCTIONS FROM SUDBURY SOURCES WOULD BE BENEFICIAL TO THE LOCAL SUDBURY ENVIRONMENT, AND WOULD ASSIST IN PROTECTING OTHER JURISDICTIONS, REDUCTIONS FROM THESE SOURCES ALONE WOULD NOT BE SUFFICIENT TO PROTECT ONTARIO'S SENSITIVE AREAS.

A SEPARATE BUT RELATED STUDY WAS RELEASED BY THE ONTARIO-CANADA TASK FORCE ON INCO AND FALCONBRIDGE, THE MAIN INDUSTRIES IN SUDBURY.

THE FINAL REPORT OF THE TASK FORCE WAS RELEASED IN DECEMBER, 1982. ALTHOUGH SPECIFIC RECOMMENDATIONS WERE NOT CONTAINED IN THE REPORT, FINDINGS INDICATED THAT A NUMBER OF PROCESS CHANGES AND ABATEMENT CONTROLS WERE AVAILABLE TO ACHIEVE SUCCESSIVELY LOWER SO₂ EMISSIONS.

DEPENDENT ON ECONOMIC CONDITIONS FOR NICKEL AND OTHER METALS, THE ABILITY OF THE COMPANIES TO FINANCE FURTHER CONTROL MEASURES WOULD BE AN IMPORTANT DETERMINANT TO WHEN REDUCTIONS ARE ACHIEVABLE.

A KEY CONTRIBUTION TO THESE REDUCTIONS IS MODERNIZATION OF INCO'S SMELTER, WHICH IS CURRENTLY UNDER ENGINEERING REVIEW.

THE TASK FORCE REPORT IS NOW BEING REVIEWED BY MY MINISTRY, THE TWO COMPANIES AND OTHER MINISTRIES. THE ABATEMENT PROGRAMS DESCRIBED IN THE REPORT WILL FORM A CORNERSTONE IN THE DEVELOPMENT OF ONTARIO'S ABATEMENT STRATEGY.

FOR CANADIANS, THERE IS NO QUESTION BUT THAT ACTION MUST BE TAKEN TO DECREASE SIGNIFICANTLY THE POLLUTANTS WHICH ARE PRECURSORS OF ACID RAIN. THOSE WHO ARE PESSIMISTIC ABOUT THE PROSPECTS FOR HALTING TODAY'S HIGH LEVELS OF EMISSIONS HAVE PERHAPS IGNORED ONTARIO'S EXAMPLE.

SINCE 1970, EMISSIONS OF SULPHUR DIOXIDE IN ONTARIO HAVE BEEN REDUCED FROM 3.8 MILLION TONNES IN 1970 TO 1.8 MILLION TONNES IN 1980. PROGRAMS WERE PUT IN PLACE AT ALL ONTARIO SOURCES TO REDUCE EMISSIONS WHEN ATMOSPHERIC CONDITIONS REQUIRE IT.

ONTARIO HAS IMPOSED NEW AND TOUGHER REGULATIONS ON ITS TWO MAJOR SOURCES OF ACID RAIN-CAUSING POLLUTANTS, INCO AND ONTARIO HYDRO. THESE TWO SOURCES ACCOUNT FOR 70 PER CENT OF OUR TOTAL EMISSIONS.

IN 1980, THE APPROVED LEVEL OF SULPHUR DIOXIDE EMISSIONS AT INCO WAS 3,600 TONS PER DAY. THE COMPANY WAS REQUIRED BY GOVERNMENT REGULATION, WHICH CANNOT BE APPEALED, TO LIMIT EMISSIONS TO 2,500 TONS PER DAY IMMEDIATELY AND BY 1983 TO REDUCE FURTHER TO 1,950 TONS PER DAY.

THIS REPRESENTS A REDUCTION OF APPROXIMATELY 70 PER CENT FROM PEAK EMISSION LEVELS IN SUDBURY IN THE 1960s. I HAVE CHECKED WITH MY OFFICIALS AND AM PLEASED TO REPORT THAT INCO HAS CUT DOWN TO THE NEW LEVEL OF 1,950 TONS A DAY AND IS STICKING TO IT. IN FACT, IN 1982, EMISSIONS AVERAGED LESS THAN 1,000 TONS PER DAY.

ONTARIO HYDRO IS ALSO UNDER GOVERNMENT REGULATION TO REDUCE ITS EMISSIONS OF SULPHUR DIOXIDE AND NITROGEN OXIDE. THE REGULATION REQUIRES HYDRO TO REDUCE ITS ACID GAS EMISSIONS BY APPROXIMATELY 43 PER CENT FROM 1980 LEVELS BY 1990, WITH AN INTERIM REDUCTION TO 390,000 TONNES OF SULPHUR DIOXIDE BY 1986.

IT IS ONTARIO'S POLICY NOT TO PRESCRIBE HOW HYDRO SHOULD REDUCE ITS EMISSIONS BUT RATHER TO SET EMISSION LIMITS AND MAKE SURE THAT THEY ARE MET. IT IS ENTIRELY HYDRO'S BUSINESS HOW IT GOES ABOUT ACHIEVING THE PRESCRIBED LIMITS.

A CONSIDERABLE AMOUNT OF CONTROVERSY HAS SURROUNDED HYDRO'S DECISION TO DELAY THE INSTALLATION OF SCRUBBERS ON TWO OF ITS COAL-FIRED PLANTS. THESE PLANTS RUN ONLY 35 PER CENT OF THE TIME AND ARE USED PRIMARILY TO MEET PEAK ELECTRICAL DEMAND.

SINCE SCRUBBERS ONLY GIVE FULL VALUE WHEN USED WITH PLANTS THAT BURN HIGH-SULPHUR COAL AND THAT ARE OPERATING MOST OF THE TIME, THE INSTALLATION OF SCRUBBERS IS NOT A COST-EFFECTIVE MEANS OF EMISSION REDUCTION FOR ONTARIO HYDRO.

ANTI ACID RAIN CONTROL LOBBYISTS FREQUENTLY CITE THE LARGE NUMBER OF SCRUBBERS THAT THE U.S. HAS REQUIRED TO BE INSTALLED ON COAL-FIRED PLANTS. BUT THESE SCRUBBERS HAVE BEEN INSTALLED TO MEET LOCAL AIR QUALITY OBJECTIVES AND NOT IN RESPONSE TO THE LONG-RANGE TRANSPORT OF ATMOSPHERIC POLLUTANTS.

AT THE SAME TIME, THE UNITED STATES CONSTRUCTED SOME 300 TALL STACKS TO EXPORT THE REMAINING POLLUTION. ONTARIO HAS ONLY ONE TALL STACK, AT SUDBURY.

TO MEET OUR REGULATION, ONTARIO HYDRO WILL USE A COMBINATION OF VARIOUS METHODS, INCLUDING LOW-SULPHUR AND WASHED COAL AT ITS COAL-FIRED PLANTS AND INCREASING THE USE OF ITS HYDRO-ELECTRIC AND NUCLEAR STATIONS.

PERHAPS THE BEST EXAMPLE OF HOW ONTARIO INDUSTRY IS CO-OPERATING WITH THE GOVERNMENT TO ACHIEVE EMISSIONS REDUCTIONS IS ONTARIO'S NEWEST SMELTER, THE KIDD CREEK OPERATION IN THE TIMMINS AREA.

THIS ZINC SMELTER HAS A SULPHURIC ACID PLANT THAT CAPTURES 97 PER CENT OF THE SULPHUR DIOXIDE FROM THE GAS STREAM.

CANADA IS COMMITTED TO AN OVERALL 50 PER CENT REDUCTION IN EMISSIONS IF A COMPARABLE COMMITMENT IS MADE BY THE UNITED STATES. THE FEDERAL GOVERNMENT IS SUPPORTED STRONGLY IN THIS POSITION BY ONTARIO AND OTHER PROVINCES CONCERNED ABOUT DAMAGES RESULTING FROM ACID GAS EMISSIONS. THESE MEASURES REPRESENT MAJOR ACTIONS TO REDUCE CANADA'S CONTRIBUTION TO THE ACID RAIN PROBLEM.

IT HAS BEEN SAID THAT ACID RAIN CONSTITUTES A TEST OF THE RULE OF LAW IN THE RELATIONSHIP BETWEEN CANADA AND THE UNITED STATES. THE PRINCIPLES INVOLVED ARE CLEAR.

BOTH GOVERNMENTS SUPPORT PRINCIPLE 21 OF THE 1972 STOCKHOLM DECLARATION WHICH PROVIDES THAT STATES HAVE

"...THE RESPONSIBILITY TO ENSURE THAT ACTIVITIES WITHIN THEIR JURISDICTION OR CONTROL DO NOT CAUSE DAMAGE TO THE ENVIRONMENT OF OTHER STATES OR OF AREAS BEYOND LIMITS OF NATIONAL JURISDICTION..."

THIS PRINCIPLE WAS AGAIN CONFIRMED WHEN CANADA AND THE UNITED STATES SIGNED THE UNITED NATIONS CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION IN 1979.

CANADA AND THE UNITED STATES HAVE DEVELOPED A TRADITION OF SOLVING MUTUAL ENVIRONMENTAL PROBLEMS EFFECTIVELY AND FAIRLY. THE GREAT LAKES WATER QUALITY AGREEMENT IS A PARTICULARLY FINE EXAMPLE OF HOW OUR COUNTRIES HAVE CO-OPERATED TO DEAL WITH A LARGE-SCALE BILATERAL POLLUTION PROBLEM.

THERE WERE NO QUESTIONS ASKED ABOUT WHICH HOUSEHOLD USING WHAT DETERGENT CAUSED WHICH ALGAL BLOOMS IN LAKE ERIE. THE CUMULATIVE EFFECTS OF ALL THE DISCHARGES WERE RECOGNIZED AND BOTH COUNTRIES AGREED TO TAKE ACTION TO SUBSTANTIALLY REDUCE THE LOADINGS.

THE RESULT WAS THE VIRTUAL ELIMINATION OF A SERIOUS FORM OF POLLUTION. IF WE HAD WAITED FOR ALL THE SCIENTIFIC EVIDENCE IN THE CASE OF THE GREAT LAKES, TODAY THE TWO COUNTRIES WOULD SHARE THE WORLD'S LARGEST CESSPOOLS.

AN INTERNATIONAL ARBITRATION IN THE 1930S BETWEEN CANADA AND THE UNITED STATES PROVIDED THE CLEAREST STATEMENT OF INTERNATIONAL LAW AS IT RELATES TO AIR POLLUTION. THE DECISION OF THE TRAIL SMELTER ARBITRATION STATES:

"...UNDER THE PRINCIPLES OF INTERNATIONAL LAW, AS WELL AS THE LAW OF THE UNITED STATES, NO STATE HAS THE RIGHT TO USE OR PERMIT THE USE OF ITS TERRITORY IN SUCH MANNER AS TO CAUSE INJURY BY FUMES IN OR TO THE TERRITORY OF ANOTHER OR THE PROPERTIES OR PERSON THEREIN..."

THE LEGISLATORS WHO ENACTED SECTION 115 OF THE U.S. CLEAN AIR ACT IN ITS ORIGINAL FORM IN 1970 CLEARLY RECOGNIZED THIS INTERNATIONAL RESPONSIBILITY. IN 1977, THE CONGRESS OF THE UNITED STATES RECOGNIZED THE INCREASING SEVERITY OF THE PROBLEM BY AMENDING THE PROVISION TO MAKE IT EVEN MORE EFFECTIVE.

AND, IN 1980, CANADA AMENDED ITS FEDERAL CLEAN AIR ACT WHICH ALLOWS FOR SOURCE-SPECIFIC EMISSION STANDARDS TO STOP ENVIRONMENTAL DAMAGE TO ANOTHER COUNTRY.

IF THESE INTERNATIONAL COMMITMENTS ARE TO BE MET, THEN DECISION-MAKERS AND AGENCIES WHO SET AND ENFORCE STANDARDS MUST BE PREPARED TO TRANSLATE COMMENDABLE PROSE INTO CONCRETE ACTIONS.

WE IN ONTARIO HAVE HAD AMPLE OPPORTUNITY IN RECENT MONTHS TO TEST THE RESOLVE OF AMERICAN AUTHORITIES TO UPHOLD THEIR INTERNATIONAL COMMITMENTS AND INDEED THEIR OWN LAWS. I WILL DEAL HERE WITH ONLY THREE, ALL AFFECTING THE TRANSBOUNDARY TRANSPORT OF AIR POLLUTION.

ONE INVOLVES PUBLIC HEARINGS BY THE MICHIGAN AIR POLLUTION CONTROL COMMISSION. THE PURPOSE OF THE HEARINGS WAS TO RECEIVE COMMENTS ON AN APPLICATION BY DETROIT EDISON TO DELAY BRINGING ITS MONROE POWER PLANT INTO COMPLIANCE WITH MICHIGAN'S "1% OR EQUIVALENT SULPHUR IN FUEL" RULE. THAT RULE IS INTENDED TO PROTECT AIR QUALITY. THE COMPANY HAD ALREADY RECEIVED TWO EXTENSIONS PREVIOUSLY.

DETROIT EDISON CONTENDED THAT ITS PLANT'S CONTRIBUTION TO THE OVERALL PROBLEM OF AIR QUALITY AND ACID RAIN WAS INSIGNIFICANT. IN ADDITION, IT SAID, COAL WITH 1% SULPHUR IS RELATIVELY EXPENSIVE, AND WOULD RESULT IN HIGHER ELECTRICITY RATES AND SO ON.

THE MONROE POWER PLANT HAD BEEN BURNING 2.37 PER CENT SULPHUR COAL. IN 1979, MONROE EMITTED 264.9 THOUSAND TONNES OF SULPHUR DIOXIDE, MAKING IT THE FIFTH LARGEST EMITTER OF SO_2 IN EASTERN NORTH AMERICA. IF THE PLANT WERE TO COMPLY WITH THE STATE'S REGULATION, SULPHUR DIOXIDE EMISSIONS WOULD DROP TO 112.0 THOUSAND TONNES PER YEAR.

ONTARIO WAS A PARTY TO THE HEARINGS AND SUBMITTED EVIDENCE TO THE EFFECT THAT IF THE PLANT WAS ONCE AGAIN EXEMPTED, ITS SULPHUR DIOXIDE EMISSIONS WOULD CONTINUE TO BLOW INTO ONTARIO TO THE DETRIMENT OF CANADIAN CITIZENS. ONTARIO'S POSITION, I AM TOLD, RECEIVED CONSIDERABLE SUPPORT FROM OTHER PARTIES TO THE HEARING.

THE AFFAIR TOOK MANY TWISTS AND TURNS, AND MORE HEARINGS. THE UPSHOT WAS THAT DETROIT EDISON'S VARIOUS SCHEMES TO ESCAPE THE 1% SULPHUR RULE WERE REJECTED. IT WAS ORDERED TO COMPLY.

NOW, THE COMPANY HAS APPEALED TO THE COURTS. IF THE COURTS UPHOLD THE POLLUTION CONTROL COMMISSION, DETROIT EDISON WILL HAVE TO USE 1% SULPHUR COAL BY 1985 AND THE ONTARIO POSITION WILL BE VINDICATED.

ANOTHER CASE IN WHICH WE HAVE INTERVENED INVOLVES THE PETERSBURG GENERATING STATION OF THE INDIANAPOLIS POWER AND LIGHT COMPANY.

NOW, THE STATE OF INDIANA AND THIS PARTICULAR COMPANY HAVE FINE RECORDS WITH RESPECT TO CONTROLLING HARMFUL AIR EMISSIONS. IN FACT, THE PETERSBURG PLANT SWITCHED TO LOW-SULPHUR COAL AND INSTALLED FLUE-GAS DESULPHURIZATION EQUIPMENT TO KEEP ITS EMISSIONS DOWN.

WHAT CONCERNED US WAS AN APPLICATION BY THE COMPANY TO THE INDIANA AIR POLLUTION CONTROL BOARD TO INCREASE ITS SULPHUR DIOXIDE EMISSIONS FROM TWO UNITS OF THE PETERSBURG PLANT TO 7.11 POUNDS PER MILLION BTUS OF HEAT ON A CALENDAR MONTH BASIS FROM THE LEGALLY PERMITTED 6.0 POUNDS PER MILLION BTUS.

WE PETITIONED THE AGENCY OF THE INDIANA STATE GOVERNMENT TO DENY THE REQUEST AND CITED THE PRINCIPLES OF INTERNATIONAL LAW I HAVE DESCRIBED. HOWEVER, THE STATE SAW FIT TO PERMIT THE INCREASE AND THE MATTER IS NOW BEFORE THE ENVIRONMENTAL PROTECTION AGENCY.

WHETHER OUR REPRESENTATION WILL BE CONSIDERED IN THE FINAL OUTCOME IS IMPOSSIBLE TO TELL. WE GAVE IT OUR BEST EFFORT, AND I'M GLAD WE DID.

THE THIRD RECENT INTERVENTION IN WHICH WE ARE INVOLVED CONCERNS THE INDIANA-MICHIGAN ELECTRIC COMPANY'S BREED PLANT IN SULLIVAN COUNTY, INDIANA.

THIS COMPANY IS ASKING THE ENVIRONMENTAL PROTECTION AGENCY FOR A RELAXATION IN SULPHUR DIOXIDE EMISSION STANDARDS. IT WANTS TO RAISE ITS EMISSIONS FROM THE PRESENT 6.0 POUNDS PER MILLION BTUs OF HEAT TO 9.75 POUNDS PER MILLION BTUs -- A SUBSTANTIAL INCREASE.

IN OUR VIEW, THE GRANTING OF SUCH AN INCREASE WOULD BE A VIOLATION OF OUR MEMORANDUM OF INTENT WITH THE UNITED STATES TO ENFORCE EXISTING LAWS AND REDUCE TRANSBOUNDARY AIR POLLUTION.

WE HAVE MADE STRONG REPRESENTATIONS TO THIS EFFECT TO THE ENVIRONMENTAL PROTECTION AGENCY AND AWAIT THEIR OUTCOME.

THESE ACTIONS AND ONTARIO'S EFFORTS TO ENCOURAGE OTHERS CONSTITUTE A LEADERSHIP ROLE AMONG THE MANY JURISDICTIONS IN NORTH AMERICA. WE ARE PREPARED TO IMPOSE MORE STRINGENT EMISSION STANDARDS ON PROVINCIAL SOURCES OF POLLUTION AND TO ENFORCE THESE CONTROLS.

WE WILL CONTINUE TO PARTICIPATE IN ANY ADMINISTRATIVE PROCEEDINGS WHICH COULD AFFECT THE IMPOSITION OF ACID PRECIPITATION ON ONTARIO AND WE WILL CONTINUE TO PRESS FOR STRENGTHENING SULPHUR DIOXIDE REDUCTION PROGRAMS IN ALL JURISDICTIONS.

I HAVE MENTIONED SOME OF OUR INTERNATIONAL INITIATIVES TO OBTAIN ACTIONS OF MUTUAL BENEFIT. THERE IS ONE NEW AREA WHICH WE WILL BE HEARING MORE ABOUT IN THE NEXT FEW YEARS.

THAT IS THE DEVELOPMENT OF A HIGHLY-SOPHISTICATED MATHEMATICAL MODEL DESIGNED TO LINK SOURCE AREAS OF ACID RAIN WITH SENSITIVE RECEPTOR AREAS. AGAIN, WE ARE STRENGTHENING OUR ALREADY IMPRESSIVE DATA BASE IN ORDER TO DEVELOP ACCURATE AND EFFECTIVE ABATEMENT STRATEGIES.

THIS SO-CALLED "SUPERMODEL", WHICH WE HOPE TO HAVE IN OPERATION BY 1986, IS BEING DEVELOPED AS A CO-OPERATIVE EFFORT BY MY MINISTRY, ENVIRONMENT CANADA, AND THE FEDERAL REPUBLIC OF GERMANY.

WE HAVE RECEIVED ASSURANCES OF ADDITIONAL SUPPORT FROM THE PROVINCE OF QUEBEC AND THE STATE OF MINNESOTA, AND THE STATE OF NEW YORK IS CONSIDERING OUR SUGGESTION THAT IT PARTICIPATE AS WELL.

UNDER OUR MEMORANDUM OF UNDERSTANDING WITH THE STATE OF NEW YORK, WHICH WAS CONCLUDED ON APRIL 28TH, MY MINISTRY HAS MADE A LONG LIST OF SUGGESTIONS FOR MUTUAL INVOLVEMENT.

THESE RANGE ALL THE WAY FROM STANDARDIZING SOME OF OUR LABORATORY METHODS SO WE CAN COMPARE RESULTS, TO CO-OPERATIVE LEGAL ACTION. ONTARIO AND NEW YORK WORKED WELL TOGETHER IN JUNE OF 1981 AT HEARINGS OF THE ENVIRONMENTAL PROTECTION AGENCY IN WASHINGTON.

OTHER AREAS IN WHICH ONTARIO AND NEW YORK CAN COMPLEMENT EACH OTHER INVOLVE THE FURTHER STUDY OF MERCURY IN FISH, THE STUDY OF AIR MASS MOVEMENT, FORESTRY AND CROP EFFECTS, AND LAKE LIMING.

WE HAVE MADE A TENTATIVE AGREEMENT WITH THE GOVERNMENT OF NORWAY TO SHARE IN THE FUNDING OF ITS REVERSAL OF ACIDIFICATION PROJECT. THIS IS CONDITIONAL ON THE NORWEGIANS OBTAINING A SIMILAR PLEDGE FROM ENVIRONMENT CANADA.

SINCE FEBRUARY, 1982, WHEN THE CANADIAN MINISTER OF THE ENVIRONMENT ASKED THE PROVINCES TO DEVELOP A NUMBER OF OPTIONS TO REDUCE SO₂ IN EASTERN CANADA, A SERIES OF MEETINGS HAS TAKEN PLACE.

A NUMBER OF ABATEMENT OPTIONS ARE CURRENTLY BEING REVIEWED BY THE PROVINCES AND LAST FRIDAY WE MET WITH THE FEDERAL MINISTER TO DISCUSS STRATEGY.

THE CONTROL OF TOXIC CHEMICALS IS NEAR THE TOP OF THE AGENDA IN BOTH CANADA AND THE UNITED STATES. BOTH NATIONS AND THE STATES AND PROVINCES ARE DEVOTING AN ENORMOUS AMOUNT OF RESOURCES TO THE CONTROL OF TOXIC CHEMICALS AND THE PREVENTION OF UNNECESSARY AND HARMFUL EXPOSURE TO THEM.

PERHAPS IT IS TIME TO BEGIN THINKING ABOUT ACID RAIN AS THE TOXIC SUBSTANCE IT IS, THREATENING MUCH OF NORTH AMERICA'S NATURAL ENVIRONMENT. MEETING THIS THREAT WITH POSITIVE, EFFECTIVE SOLUTIONS IS THE ACID TEST OF BOTH NATIONS' COMMITMENT TO INTERNATIONAL POLLUTION ABATEMENT.

THE SCREENING MODEL

IN THE 1980s, SOLUTIONS TO THE COMPLEX AND SERIOUS ENVIRONMENTAL ISSUES FACED BY MY MINISTRY REQUIRE INNOVATIVE PROBLEM SOLVING. IN TACKLING THESE CHALLENGES MY MINISTRY HAS DEVELOPED CREATIVE POLICY INSTRUMENTS AND ANALYTICAL APPROACHES. TO THE CREDIT AND REPUTATION OF THIS PROVINCE, MANY OF MY MINISTRY'S ACCOMPLISHMENTS HAVE GAINED NATIONAL AND INTERNATIONAL RECOGNITION.

THE APPROACH TAKEN MUST FIT THE PROBLEM, AND THE NEEDS OF THE PUBLIC, INDUSTRY, AND THE GOVERNMENT. WHEN PUBLIC HEALTH AND SAFETY IS AN OVERRIDING FACTOR, AS IT WAS DURING THE MISSISSAUGA DERAILMENT, MY MINISTRY WORKED AROUND THE CLOCK IN CO-OPERATION WITH INDUSTRY AND OTHER MINISTRIES AND USED SOPHISTICATED MONITORING EQUIPMENT AND EXPERTISE HELPING TO ENSURE PUBLIC SAFETY.

WHEN PROBLEMS INVOLVE BRINGING TOGETHER DIFFERENT INTERESTS WHICH HAVE DIFFERENT EXPECTATIONS (AS IN THE CASE OF WASTE MANAGEMENT), MY MINISTRY IS TAKING A LEADERSHIP ROLE IN SETTING OUT A PROPOSED BLUEPRINT FOR WHAT NEEDS TO BE DONE AND WHO MUST PARTICIPATE. THEN WE ARE GOING TO THE PUBLIC AND SOLICITING COMMENTS AND FEEDBACK.

WHEN COMPLEX ABATEMENT PROBLEMS REQUIRING SIGNIFICANT EXPENDITURES BY INDUSTRY ARISE BECAUSE OF KNOWLEDGE WHICH REQUIRES NEW STEPS IN ENVIRONMENTAL PROTECTION, MY MINISTRY IS WORKING ON WAYS TO ACHIEVE THE MAXIMUM ENVIRONMENTAL BENEFIT AT THE MINIMUM COST. WITH INDUSTRY ESPECIALLY, THE CURRENT REALITIES OF THE ECONOMY DICTATE THAT WE SHOULD "SPEAK IN INDUSTRY'S FRAME OF REFERENCE" WHEN WE DEMAND CLEAN-UP ACTION.

MY MINISTRY'S MOST RECENT INNOVATIVE EFFORTS HAVE BEEN IN THE CONTROVERSIAL AREA OF DEVELOPING STRATEGIES TO PROTECT THE ENVIRONMENT FROM ACIDIC DEPOSITION. THROUGH THE EFFORTS OF MY MINISTRY, A UNIQUE PROCEDURE HAS BEEN DESIGNED WHICH ASSISTS DECISION MAKERS IN ESTABLISHING ENVIRONMENTAL OBJECTIVES ON A PROVINCIAL, NATIONAL OR INTERNATIONAL BASIS.

SUCH A TOOL IS USABLE IN MANY AREAS OF POLLUTION AND MY PLANS ARE TO EMPLOY THE TOOL WHENEVER A POLLUTION SITUATION EXISTS WHICH INVOLVES MORE THAN ONE POLLUTION SOURCE AND MORE THAN ONE DAMAGE AREA. IN THE CASE OF ACID RAIN, AS YOU KNOW, THE ENVIRONMENTAL OBJECTIVE IS TO REDUCE THE ATMOSPHERIC DEPOSITION OF SULPHUR AND NITROGEN COMPOUNDS WHICH ARE ACIDIFYING OUR LAKES, DAMAGING FORESTS, AND WHICH ARE CAUSING DAMAGE TO PROPERTY AND MATERIALS.

IN TECHNICAL LANGUAGE, MY MINISTRY'S ECOLOGISTS, AS PART OF THE U.S.-CANADA MEMORANDUM OF INTENT WORKING GROUPS, HAVE STATED THAT AS A FIRST STEP, WET SULPHATE DEPOSITION SHOULD BE CUT TO 20 KILOGRAMS PER HECTARE PER YEAR.

ESTABLISHING THIS GOAL WAS ESSENTIAL AND CAN BE VIEWED AS A MAJOR BREAKTHROUGH IN THE ACID RAIN ARENA. HOWEVER, WHEN ONE SITS DOWN TO DESIGN AN ABATEMENT STRATEGY, IT TURNS OUT THAT THERE IS LITERALLY AN INFINITE NUMBER OF WAYS TO CUT SULPHUR DIOXIDE EMISSIONS FROM SOURCES, IN ORDER TO MEET THIS GOAL.

THERE ARE 16 INDUSTRIAL SOURCES OF SO_2 IN EASTERN CANADA EMITTING MORE THAN 19,000 METRIC TONS OF SO_2 PER YEAR, AND OVER 219 OF THESE SOURCES IN THE U.S. THE SOURCES INCLUDE POWER PLANTS, SMELTERS, REFINERIES AND STEEL MILLS. CUTTING EMISSIONS FROM SOME OR ALL OF THESE SOURCES CAN MEET THE ENVIRONMENTAL GOALS, BUT WHICH COMBINATION OF CUTS WILL BE LEAST COSTLY, MAKE BEST USE OF EXISTING ABATEMENT MEASURES, BE MOST PRACTICAL IN AN ENGINEERING SENSE, OR BE MOST FEASIBLE POLITICALLY?

HISTORICALLY, WHEN SUCH A QUESTION AROSE, THE SOLUTIONS IMPLEMENTED WERE DESIGNED WITHOUT INDUSTRIAL ECONOMICS IN THE FOREGROUND. ONE APPROACH TO THE ACID RAIN PROBLEM I JUST OUTLINED WHICH MIGHT HAVE BEEN SUGGESTED A DECADE AGO IS THE SO-CALLED "ACROSS THE BOARD" CUTBACK STRATEGY. EACH SOURCE IS SIMPLY TOLD TO CUT BACK BY A FIXED PERCENTAGE OF THEIR EMISSIONS.

SUCH AN APPROACH HAS PROVEN TO BE INEFFICIENT AND OFTEN PENALIZES THOSE INDUSTRIAL "GOOD CITIZENS" WHICH IN THE PAST HAVE ALREADY CUT BACK EMISSIONS, SOMETIMES AT GREAT COST. FINALLY, FOR SOME INDUSTRIES, SUCH A CUTBACK IS SIMPLY NOT POSSIBLE, BECAUSE THE POLLUTION CONTROL TECHNOLOGY IS NOT AVAILABLE. THE COST OF SUCH STRATEGY IS DEFINITELY NOT MINIMIZED.

MORE RECENTLY, AGENCIES SUCH AS THE ENVIRONMENTAL PROTECTION AGENCY IN THE U.S. HAVE BEEN EXPERIMENTING WITH CONCEPTS SUCH AS "BUBBLES", WHICH ALLOW A PLANT TO CHOOSE WHICH SOURCES UNDER ITS CONTROL CAN BE CUT TO ACHIEVE A GLOBAL EMISSION REDUCTION. THE STRATEGY IS TO PUT AN IMAGINARY "BUBBLE" OVER ALL OF THAT INDUSTRY'S SOURCES, AND GIVE INDUSTRY FREEDOM TO MEET THE GOAL INSIDE THE BUBBLE.

MY MINISTRY ADVANCED THIS PHILOSOPHY IN 1981 WHEN WE WROTE THE ONTARIO HYDRO REGULATION TO CUT SO_2 . INSTEAD OF PUTTING A BUBBLE OVER JUST ONE PLANT, AS EPA HAS CONSIDERED, OUR REGULATION PUT A "BUBBLE" OVER ALL OF HYDRO'S PLANTS WHICH ARE MAINLY IN SOUTHERN ONTARIO.

THE USE OF THE BUBBLE IS A BIG STEP FORWARD, SINCE IT ENABLES ONE INDUSTRY TO MINIMIZE COSTS. THE IDEA OF AN "EMISSIONS CAP BUBBLE" IS ALSO THE CORRECT APPROACH TO REDUCE ACID RAIN. THE "CLEANLINESS" OF EMISSION IS NOT ADEQUATE TO SOLVE THE ACID RAIN PROBLEM. LIMITS ON THE ABSOLUTE QUANTITY OF SO_2 DISCHARGED ARE NEEDED.

HOWEVER, WHEN A REGULATORY AGENCY SUCH AS MINE, OR A GROUP OF AGENCIES SUCH AS THE ENVIRONMENT MINISTRIES OF THE SEVEN EASTERN CANADIAN PROVINCES AND OVER 30 U.S. STATES TRY TO DESIGN A STRATEGY, THE CONCEPT OF "THE BUBBLE" ALSO PROVES INADEQUATE, BECAUSE IT CANNOT IDENTIFY HOW TO MINIMIZE COSTS AMONG DIFFERENT INDUSTRIES. SOMETHING MORE IS NEEDED, AND SUCH A TOOL MUST BE MORE SOPHISTICATED THAN JUST CUTTING THE "CHEAPEST SOURCES" FIRST, IF THE GOAL OF 20 KG/HA/YR IS TO BE MET IN ALL OF NORTH AMERICA'S SENSITIVE AREAS.

THE TOOL MY MINISTRY HAS DEVELOPED -- THE SCREENING MODEL -- HAS THE ELEMENTS REQUIRED TO PROVIDE SIGNIFICANT GUIDANCE IN DESIGNING AN ACID RAIN CONTROL STRATEGY WHICH IS SIMULTANEOUSLY THE LEAST COSTLY AND THE MOST ENVIRONMENTALLY EFFECTIVE. THE SCREENING MODEL GOES FAR BEYOND ANY REGULATORY ANALYSIS NOW DONE ANYWHERE ELSE IN THE WORLD.

THE UNIQUENESS OF THE PROCEDURE LIES IN ITS COMPREHENSIVENESS. IN ITS APPLICATION TO ACID RAIN, THE MODEL INTEGRATES THE OUTPUT FROM OUR PRESENTLY AVAILABLE, SIMPLE LONG RANGE TRANSPORT MODEL WITH AN INDEX OF AVAILABLE TECHNOLOGIES FOR EACH SOURCE CONSIDERED. THE ATMOSPHERIC MODEL DESCRIBES THE RELATIONSHIP BETWEEN POLLUTION SOURCES AND SENSITIVE AREAS.

THE TECHNICAL INDEX, OR "SOURCE BOOK", CONTAINS THE COST FOR EACH TECHNOLOGY, THE AMOUNT OF SO_2 REMOVAL WHICH CAN BE OBTAINED, AND INFORMATION ON WHETHER TECHNOLOGIES CAN BE COMBINED "STEP BY STEP" OR MUST BE COMMITTED TO IMMEDIATELY AND TOTALLY TO CUT EMISSIONS.

INFORMATION REGARDING WHEN THE TECHNOLOGIES CAN BE USED, AND HOW LONG IT TAKES TO INSTALL THE PROCESSES, IS ALSO ON FILE. THUS, WHENEVER EMISSIONS ARE CUT BACK FROM ANY SOURCE IN THE MODEL, THE COST, TIMING, AND TECHNIQUES CAN BE IDENTIFIED WHICH ACHIEVE THE CUTBACK.

PUT SIMPLY, FOR ANY DESIRED ENVIRONMENTAL OBJECTIVE, THE ONTARIO MINISTRY OF THE ENVIRONMENT CAN NOW ESTIMATE THE MOST COST-EFFECTIVE WAY OF ACHIEVING THE DESIRED LEVEL OF ACIDIC DEPOSITION AMONG 235 SOURCES IN SEVEN PROVINCES AND 31 STATES. THIS IS AN ACCOMPLISHMENT WHICH SHOULD SATISFY BOTH PUBLIC AND PRIVATE SECTOR ASPIRATIONS.

WHAT IS EVEN MORE INTERESTING IS THE ABILITY OUR MINISTRY NOW HAS TO SEE, IN DOLLARS AND CENTS AS WELL AS ENVIRONMENTAL RELIEF, WHAT HAPPENS WHEN OTHER STRATEGIES ARE "IMPLEMENTED" IN THE COMPUTER. FOR INSTANCE, THE COST AND ENVIRONMENTAL BENEFIT OF THE "ACROSS THE BOARD" STRATEGY CAN BE QUANTIFIED. THE SAME INFORMATION CAN BE TABULATED FOR A CO-ORDINATED CANADIAN STRATEGY, VERSUS INDEPENDENT PROVINCIAL EFFORTS.

SINCE WE HAVE U.S. SOURCES AND SENSITIVE AREAS IN OUR SCREENING MODEL, WE CAN ALSO SEE THE ECONOMIC AND ENVIRONMENTAL BENEFITS WHEN ANY CANADIAN STRATEGY IS CO-ORDINATED WITH VARIOUS U.S. PROPOSALS WHICH WE SEE PROPOSED IN THE U.S. CONGRESS, OR BY U.S. INDUSTRY. WE CAN "DEBUNK" CLAIMS BY SOME IN THE U.S. WHO SAY THAT A PROGRAM OF SO₂ CUTBACKS WILL BANKRUPT MID-WESTERN U.S. UTILITIES.

AS THE MEMBERS OF THIS COMMITTEE ARE AWARE, THE EASTERN CANADIAN PROVINCES OVER THE LAST YEAR AND A HALF HAVE BEEN GRAPPLING WITH THE ISSUE OF DEVELOPING A POLICY TO REDUCE SO₂ EMISSIONS IN ORDER TO PROTECT CANADIAN SENSITIVE AREAS. THESE DISCUSSIONS BEGAN BY USING OUR ATMOSPHERIC LONG RANGE TRANSPORT MODEL TO ILLUSTRATE THE LINKS BETWEEN ONTARIO, OTHER PROVINCIAL AND U.S. EMISSIONS SOURCES, AND SENSITIVE U.S. AND CANADIAN RECEPTOR AREAS.

HOWEVER, THE PROVINCES DID NOT DEVELOP A COMMON STRATEGY TO CUT SO₂ EMISSIONS IN CANADA UNTIL THEY SAW RESULTS FROM THE SCREENING MODEL. ONCE THE ECONOMIC AND ENVIRONMENTAL INFORMATION FOR LITERALLY SCORES OF "SCENARIOS" HAD BEEN ANALYZED BY OUR STAFF, THEN SHARED WITH STAFF OF OTHER PROVINCIAL AGENCIES, THE RESULTS FROM KEY SCENARIOS INVOLVING CANADA AND THE U.S. WERE REVIEWED BY THE PROVINCIAL MINISTRIES REPRESENTING ONTARIO, MANITOBA, QUEBEC, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD ISLAND AND NEWFOUNDLAND.

THERE ARE MANY QUESTIONS, AND MORE SCENARIOS WERE RUN. MY MINISTRY ACTED AS PART OF A "TECHNICAL SECRETARIAT" TO THE INTERPROVINCIAL GROUP, AND CARRIED OUT REQUESTED WORK WITHOUT PREJUDICE OR ANY CONSTRAINTS.

AS A RESULT OF THESE EFFORTS, I AM EXTREMELY PLEASED TO ANNOUNCE THAT, ON MAY 30, 1983, THE EASTERN PROVINCES REACHED AN AGREEMENT REGARDING A STRATEGY AND APPROACH FOR PROTECTING CANADIAN SENSITIVE AREAS. SPECIFICALLY, THE MINISTERS OF THE ENVIRONMENT ARE COMMITTED TO ACHIEVE A 20 KG PER HECTARE PER YEAR WET SULPHATE DEPOSITION IN ALL SENSITIVE AREAS IN THE MOST COST-EFFECTIVE MANNER POSSIBLE.

IT WAS ALSO RECOGNIZED THAT THIS TARGET CAN ONLY BE ATTAINED WITH U.S. PARTICIPATION. THE PROVINCES ALSO AGREED TO ESTABLISH A TASK FORCE TO REVIEW IMPLEMENTATION WHICH WILL ACHIEVE THE ENVIRONMENTAL OBJECTIVE. I AM PROUD TO SAY THAT THE EFFORTS OF MY STAFF WERE LARGELY RESPONSIBLE FOR THE ATTAINMENT OF THIS MILESTONE IN ENVIRONMENTAL DECISION-MAKING.

MOREOVER, I AM CONFIDENT THAT THROUGH THE APPLICATION OF THE MODEL, ONTARIO WILL PLAY A SIGNIFICANT ROLE IN NEGOTIATING AN ABATEMENT AGREEMENT WITH THE UNITED STATES. WE KNOW FROM OUR WORK WITH U.S. AGENCIES ON THE MEMORANDUM OF INTENT NEGOTIATIONS THAT ECONOMICS IS A KEY CONSIDERATION IN THE DESIGN OF ANY U.S. STRATEGIES. WE ALSO KNOW THAT AT THE PRESENT TIME, THERE ARE NO U.S. ANALYSIS TOOLS SUCH AS OURS. ECONOMICS ARE BEING ESTIMATED AS A CONSEQUENCE OF CUTBACK FORMULAS; THE COSTS ARE NOT BEING CONSIDERED AS A DESIGN INPUT.

THIS SPRING, A HIGH LEVEL DELEGATION FROM THE FEDERAL REPUBLIC OF GERMANY VISITED TORONTO TO LEARN ABOUT OUR ACID RAIN RESEARCH AND DISCUSS PROGRESS ON THE NEW ATMOSPHERIC MODEL WHICH WE ARE DEVELOPING WITH THEM AND ENVIRONMENT CANADA.

DURING THE DISCUSSIONS, THE PROBLEM OF DESIGNING A COST-EFFECTIVE SO₂ REDUCTION STRATEGY AROSE. WE MADE A PRESENTATION OF THE MODEL TO THE DELEGATION AND SINCE THAT TIME I HAVE BEEN CONTACTED BY THE GERMAN GOVERNMENT TO DISCUSS ARRANGEMENTS FOR ADDITIONAL MEETINGS BETWEEN TECHNICAL STAFF FROM BOTH COUNTRIES.

IT APPEARS VERY PROMISING THAT ONTARIO CAN BUILD UPON OUR EXISTING JOINT VENTURES WITH GERMANY TO INCLUDE A CO-SPONSORING OF FURTHER WORK ON THE MODEL. THE SHARING OF RESOURCES AND EXPERTISE WILL YIELD MANY DIRECT BENEFITS TO ONTARIO AND CANADA, AND THIS POTENTIAL CO-OPERATION ILLUSTRATES THAT ONTARIO HAS EXPORTABLE EXPERTISE AND INNOVATIVE THINKING TO OFFER THE WORLD.

I MIGHT STATE IN CONCLUDING THIS DISCUSSION OF INNOVATIVE POLICY DESIGN THAT WE RECOGNIZE THAT FOR ACID RAIN, NOT ALL THE ANSWERS ARE YET AVAILABLE. WHILE WE KNOW ENOUGH SCIENTIFICALLY TO TAKE STEPS NOW TO REDUCE SO_2 EMISSIONS, THERE ARE STILL QUESTIONS ABOUT THE EXACT DEGREE OF BENEFIT (DUE TO NON-LINEAR ATMOSPHERIC CHEMISTRY AND OXIDANTS) THAT SO_2 CUTS WILL ACHIEVE. THE ROLE OF NITROGEN OXIDES MUST ALSO BE CLARIFIED.

THESE QUESTIONS WILL BE ADDRESSED BY THE NEW ONTARIO-GERMANY-CANADA MODEL, AND THOSE RESULTS CAN BE PUT INTO THE SCREENING MODEL WHEN IT IS OPERATIONAL. INFORMATION FROM A FURTHER ASSESSMENT OF TECHNOLOGIES AND MORE ACCURATE COSTS, PARTICULARLY IN THE U.S., WILL ALSO BE PUT INTO THE SCREENING MODEL IN THE FUTURE. THESE DEVELOPMENTS WILL ENABLE THE NEXT STEPS OF ONTARIO'S ACID RAIN CUTBACKS TO ALSO BE DEVELOPED IN THE LEAST COST AND MOST ENVIRONMENTALLY EFFECTIVE MANNER.

NIAGARA RIVER

THE NIAGARA RIVER CONTINUES TO BE A SOURCE OF CONCERN. THE PROBLEM, AS I HAVE SAID REPEATEDLY IN THE PAST, STEMS FROM A LEGACY OF NEGLECT ON THE U.S. SIDE OF THE RIVER.

OUR SHARED WATERWAY CONTAINS CHEMICAL CONTAMINANTS FROM ABANDONED WASTE SITES ESTABLISHED AS LONG AS 40 YEARS AGO -- AT A TIME WHEN THERE WAS PRACTICALLY NO PUBLIC AWARENESS OF THE DANGERS INHERENT IN HAPHAZARDLY BURYING CHEMICAL WASTES.

HOWEVER, I WOULD MAKE TWO IMPORTANT POINTS:

- WHILE WE CONTINUE TO BE CONCERNED ABOUT LONG- TERM PROBLEMS IN THE RIVER -- THE CONTINUING ACCUMULATION OF CHEMICAL WASTE LEAKING FROM THE SHORELINE -- THERE IS ABSOLUTELY NO INDICATION OF IMPAIRMENT OF DRINKING WATER ORIGINATING IN THE NIAGARA RIVER.

. MY MINISTRY, THROUGH ITS NIAGARA RIVER IMPROVEMENT TEAM AND OTHER INITIATIVES, HAS SIGNIFICANTLY INCREASED ITS KNOWLEDGE OF THE PROBLEM SINCE I LAST APPEARED BEFORE THIS COMMITTEE. WE HAVE ENOUGH HARD EVIDENCE TO DEMAND EFFECTIVE ABATEMENT PROGRAMS. WE ARE DEMANDING SUCH PROGRAMS OF THE APPROPRIATE U.S. AUTHORITIES.

I HAVE MENTIONED THE NIAGARA RIVER IMPROVEMENT TEAM, WHICH IS MY MINISTRY'S UMBRELLA ORGANIZATION CREATED TO MONITOR CONDITIONS IN THE RIVER, CLOSELY FOLLOWS ACTIVITIES IN THE UNITED STATES, AND PARTICIPATES IN ALL POSSIBLE POLLUTION CONTROL ACTIONS IN NEW YORK STATE.

THIS TEAM OF SCIENTISTS AND OTHER SPECIALISTS, FULLY SUPPORTED BY AN EXTENSIVE REALLOCATION OF BUDGET AND OTHER RESOURCES, HAS BEEN AT WORK FOR A YEAR NOW. I KNOW YOU WILL BE IMPRESSED, AS I AM, BY THE RECORD OF ITS ACHIEVEMENTS.

THE OTHER UMBRELLA ORGANIZATION IN WHICH MY MINISTRY CONTINUES TO PLAY A ROLE OF LEADERSHIP IS THE INTERNATIONAL NIAGARA RIVER TOXICS COMMITTEE, WHICH BENEFITS FROM MEMBERSHIP AND PARTICIPATION FROM ENVIRONMENT CANADA, THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, AND THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION OF THE STATE OF NEW YORK.

LATE LAST SUMMER, YOU MAY RECALL, I INITIATED AN EXHAUSTIVE STUDY OF THE MANY FACTORS THAT LED TO THE GROSS CONTAMINATION BY WASTE CHEMICALS OF THE LOVE CANAL AREA OF NIAGARA FALLS, NEW YORK.

BETWEEN 1942 AND 1952, THE HOOKER CHEMICALS AND PLASTICS CORPORATION DEPOSITED AN ESTIMATED 22,000 TONS OF CHEMICAL WASTE ALONG THE COURSE OF THIS ABANDONED WATERWAY.

LATER, THE CITY OF NIAGARA FALLS ADDED MUNICIPAL GARBAGE. IN ADDITION, BOTH DURING AND AFTER THE SECOND WORLD WAR, VARIOUS UNITED STATES FEDERAL AGENCIES DEPOSITED UNSPECIFIED TOXIC CHEMICAL WASTES AT THIS SITE.

SUBSEQUENTLY, OF COURSE, THE PRESIDENT OF THE UNITED STATES DECLARED A STATE OF EMERGENCY AT LOVE CANAL AND THE AREA WAS EVACUATED OF SOME 2,000 RESIDENTS.

SINCE THAT TIME, U.S. STATE AND FEDERAL AGENCIES HAVE CONDUCTED VARIOUS STUDIES AND EMBARKED UPON CERTAIN INITIATIVES TO KEEP THE CONTAMINATION WHERE IT IS AND, ABOVE ALL, TO KEEP IT AWAY FROM OUR SHARED RESOURCE, THE NIAGARA RIVER. AT ITS CLOSEST POINT, LOVE CANAL IS ONLY A QUARTER-MILE FROM THE NIAGARA RIVER.

AS I REPORTED TO THE HOUSE IN APRIL OF THIS YEAR, NEITHER I NOR MY OFFICIALS HAVE EVER BEEN COMPLETELY SATISFIED WITH THE PROGRESS THE AMERICANS ARE MAKING.

WHILE THE DRINKING WATER IN COMMUNITIES ON THE CANADIAN SIDE OF THE RIVER IS PERFECTLY SAFE AS SHOWN BY OUR CONSTANT MONITORING, WE ARE CONSCIOUS OF THE POTENTIAL THREAT THAT EXISTS IF ABANDONED DUMP SITES SUCH AS LOVE CANAL ARE NOT PROPERLY CONTROLLED.

I TOLD THIS COMMITTEE A YEAR AGO THAT MANY OF THE TOXIC SUBSTANCES DISCHARGED THROUGH SEVERAL DECADES INTO THE ENVIRONMENT ARE PERSISTENT: THAT IS, THEY DO NOT READILY BIODEGRADE OR BREAK DOWN IN THE RIVER.

THE CONTINUING DISCHARGES OF PERSISTENT TOXIC SUBSTANCES ARE CAUSING A BUILD-UP OF THESE CONTAMINANTS IN THE ENVIRONMENT. EVEN IF THE INFLOW CEASED TODAY, IT WOULD TAKE MANY YEARS TO DISSIPATE THIS ACCUMULATION TO AN INSIGNIFICANT LEVEL.

BECAUSE SOME SUBSTANCES REMAIN STABLE FOR A LONG TIME, THEY ARE CARRIED FROM THE NIAGARA RIVER INTO LAKE ONTARIO, AND REMAIN TOXIC. THEY CAN THEN BIOACCUMULATE IN PLANTS AND FISH THROUGHOUT THE LAKE, REDUCING ITS ABILITY TO PROVIDE SPORT AND COMMERCIAL FISHING.

OUR PHILISOPHY FOR THE LONG-TERM PROTECTION OF THE NIAGARA RIVER AND LAKE ONTARIO REMAINS UNCHANGED: THAT DISCHARGE OF TOXIC SUBSTANCES IN TOXIC AMOUNTS SHOULD BE PROHIBITED AND THE DISCHARGE OF ANY OR ALL PERSISTENT TOXIC SUBSTANCES SHOULD BE VIRTUALLY ELIMINATED. THIS IS CONSISTENT WITH THE TERMS OF THE CANADA-UNITED STATES GREAT LAKES WATER QUALITY AGREEMENT OF 1978.

YOU WILL RECALL THAT I REPORTED TO THE HOUSE THE DISCOVERY OF TRACE AMOUNTS OF DIOXINS AND OTHER CHEMICALS AS THE RESULT OF INTENSIVE, ONGOING MONITORING OF WATER AND TESTING OF FISH IN THE NIAGARA RIVER AND ITS TRIBUTARIES. MOST OF THESE CONTAMINANTS, WE ARE CONVINCED, ARE FROM AMERICAN SOURCES.

IT WAS AGAINST THIS BACKGROUND OF CONCERN THAT LAST SUMMER MY MINISTRY ENGAGED A HIGHLY REPUTABLE ENGINEERING FIRM, GEOLOGIC TESTING CONSULTANTS LIMITED OF OTTAWA, TO CARRY OUT AN INDEPENDENT TECHNICAL REVIEW AND INTERPRETATION OF THE HYDROGEOLOGICAL CONDITIONS OF LOVE CANAL. WE WANTED RELIABLE, UP-TO-DATE DATA ON WHICH TO BASE OUR FUTURE ACTION.

THIS REPORT HAS NOW BEEN COMPLETED AND HAS BEEN REVIEWED, RESULTING IN A SERIES OF URGENT RECOMMENDATIONS WHICH I HAVE PRESENTED TO THE GOVERNMENT OF THE UNITED STATES.

THE GOVERNMENT OF ONTARIO FORMALLY ASKED THE SECRETARY OF STATE FOR EXTERNAL AFFAIRS, THE HONOURABLE ALLAN J. MACEachen, TO CONVEY THESE RECOMMENDATIONS TO THE GOVERNMENT OF THE UNITED STATES AND TO USE THE FULL WEIGHT OF HIS OFFICE TO MAKE SURE THEY WERE FORWARDED TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

THIS WAS DONE TWO MONTHS AGO, AND WE ARE AWAITING A CONSIDERED RESPONSE. AS YOU ARE AWARE, THE ENVIROMENTAL PROTECTION AGENCY WAS IN A CONSIDERABLE STATE OF TURMOIL TWO MONTHS AGO AND WE WERE NOT UNREALISTIC IN EXPECTING INSTANT ACTION.

SINCE THAT TIME, PRESIDENT REAGAN HAS APPOINTED A NEW ADMINISTRATOR OF THE EPA AND THAT GENTLEMAN, ACCORDING TO PRESS REPORTS, HAS BEEN DOING SOME HOUSE-CLEANING OF HIS OWN.

THE TERMS OF REFERENCE OF THE NEW EPA ADMINISTRATOR, WE HAVE BEEN INFORMED, ARE SOMEWHAT MORE RESPONSIVE TO CANADIAN CONCERNS, ESPECIALLY IN THE AREA OF ACID RAIN AND HAZARDOUS CONTAMINANTS, THAN THOSE UNDER WHICH THE PREVIOUS ADMINISTRATOR PRESUMABLY OPERATED.

WE ARE CONFIDENT THAT OUR PATIENCE WILL BE REWARDED ONCE THE NEW APPOINTEE HAS FULLY SETTLED INTO HIS JOB AND BEGUN ADDRESSING HIS REORDERED SET OF PRIORITIES. I PLAN TO MEET WITH HIM AT THE EARLIEST OPPORTUNITY TO CONVEY DIRECTLY OUR CONCERNS IN SEVERAL IMPORTANT AREAS OF MUTUAL INTEREST.

IN SUMMARY, THIS IS WHAT WE ARE ASKING FROM THE APPROPRIATE AMERICAN AUTHORITIES:

- THE PROVISION OF FUNDS FOR THE CLEAN-UP -- NOT JUST FURTHER INVESTIGATION AS THINGS NOW STAND, OF SEWERS, CREEKS AND OUTFALLS THAT HAVE BEEN CONTAMINATED FROM THE LOVE CANAL AREA.
- THE DREDGING OF CONTAMINATED SEDIMENT FROM CAYUGA CREEK, WHICH BOTH WE AND THE AMERICANS KNOW TO BE HEAVILY CONTAMINATED AND WHICH DRAINS INTO THE NIAGARA RIVER.

- A MONITORING SYSTEM TO ESTABLISH THE LONG-TERM EFFECTIVENESS OF REMEDIAL WORK ALREADY PLANNED BY THE ENVIRONMENTAL PROTECTION AGENCY.
- ADDITIONAL MONITORING PROGRAMS DESIGNED AND PUT IN PLACE TO SHOW WHETHER THERE IS A POSSIBILITY OF GROUND WATER AT THE SITE MOVING DOWNWARD INTO THE BEDROCK BELOW.

IF ALL THE ACTIONS CONTAINED IN THESE RECOMMENDATIONS ARE IMPLEMENTED, TOGETHER WITH THE REMEDIAL MEASURES ALREADY IN HAND BY THE ENVIRONMENTAL PROTECTION AGENCY, I BELIEVE THAT THE PROBLEMS CAUSED BY LOVE CANAL WILL IN LARGE MEASURE BE CONTAINED.

AND, IF THE OTHER WASTE DISPOSAL SITES ADJACENT TO THE NIAGARA RIVER ARE CONTROLLED TO THE SAME EXTENT AS THE LOVE CANAL WILL BE, WE WILL MAKE A TREMENDOUS STRIDE TOWARDS PROTECTING AND IMPROVING THE RIVER'S QUALITY.

WE MUST ALL REALIZE THAT CANADA AND THE UNITED STATES ARE THE JOINT CUSTODIANS AND PROTECTORS OF THE NIAGARA RIVER. AS THE PROVINCE WHICH SHARES THIS WATERWAY, ONTARIO HAS THE MANDATE AND THE RESPONSIBILITY TO TAKE ACTION ON BEHALF OF OUR RESIDENTS.

EARLIER THIS YEAR, MY MINISTRY'S PERSISTENT EFFORTS TO DETECT DIOXIN IN WATER THROUGH REGULAR SAMPLING IDENTIFIED MINUTE TRACES OF THE TETRACHLORODIBENZODIOXIN (TCDD) FAMILY OF CHEMICALS IN THREE SAMPLES OF UNTREATED WATER FROM THE NIAGARA AREA.

OUR SCIENTISTS IDENTIFIED THE PROBABLE PRESENCE OF THESE CHEMICALS IN TWO SAMPLES OF SURFACE WATER FROM THE NIAGARA RIVER, AND IN ONE FROM A CHANNEL OFF THE WELLAND SHIP CANAL IN THE ST. CATHARINES AREA.

TRACES OF A TCDD SUBSTANCE WERE DETECTED AT THE LOWEST LEVEL EVER MEASURED AND REPORTED OF ANY CONTAMINANT FOUND IN ONTARIO.

THE LEVELS IN THE THREE SAMPLES DETECTED WERE 0.017 PARTS PER TRILLION IN SAMPLES FROM THE UPPER NIAGARA RIVER, 0.010 PARTS PER TRILLION FROM THE LOWER NIAGARA RIVER, AND 0.028 PARTS PER TRILLION FROM THE WELLAND SHIP CANAL.

TCDD WAS IDENTIFIED IN ONLY THREE OF THE 154 SAMPLES TESTED AND ANALYZED FROM THE NIAGARA AREA AND WAS DETECTED AT SUCH MINUTE LEVELS IN THE SAMPLES IT IS NOT POSSIBLE TO BE CERTAIN THAT DIOXIN WAS INDEED PRESENT IN THE RIVER AND CANAL.

NO TCDD WAS DETECTED IN SAMPLES OF TREATED DRINKING WATER FROM NIAGARA-ON-THE-LAKE, NIAGARA FALLS OR ST. CATHARINES. PREVIOUS AND SUBSEQUENT SAMPLES WERE ALSO FREE OF DIOXIN.

WITH ONLY THREE OF THE SAMPLES OF RAW SURFACE WATER SHOWING POSSIBLE TRACES, AND NO SIGNS OF DIOXINS IN TREATED DRINKING WATER, OUR BEST ADVICE IS THAT HEALTH CONCERNS ARE UNLIKELY AND UNJUSTIFIED.

INFORMATION ON THE TEST RESULTS WAS PROVIDED TO NIAGARA AREA MUNICIPALITIES. THE MINISTRY CONTINUES TO SAMPLE IN THE AREA AT THESE AND OTHER LOCATIONS IN EFFORTS TO DETERMINE IF DIOXIN IS PRESENT AND TO LEARN MORE ABOUT THE WAY IT IS TRANSPORTED IN WATER.

LARGER SAMPLES ARE BEING COLLECTED TO INCREASE THE MINISTRY'S ABILITY TO DETECT EXTREMELY SMALL CONCENTRATIONS. IF TCDD IS FOUND, TESTS WILL BE RUN TO DETERMINE IF ANY OF IT IS THE 2,3,7,8-TCDD MEMBER OF THE DIOXIN FAMILY.

ADDITIONAL TESTS HAVE BEEN ORDERED TO SEE IF DIOXINS ARE DISSOLVED IN THE WATER OR PRESENT MAINLY ON SUSPENDED PARTICLES BECAUSE MINISTRY SCIENTISTS SUSPECT THAT ATTACHMENT TO PARTICULATES SUCH AS CLAY IS THE MOST LIKELY FORM OF TRANSPORT IN WATER.

IF PRESENT MAINLY ON PARTICLES, ANY DIOXINS WOULD BE LARGELY REMOVED BY STANDARD WATER-TREATMENT PROCESSES.

THIS ADDED INFORMATION WILL ALSO HELP THE MINISTRY IN CHECKING POSSIBLE SOURCES OF DIOXINS. THE MOST NOTABLE AND FAMILIAR MEMBER OF THE DIOXIN FAMILY, 2,3,7,8-TCDD, IS CONSIDERED THE MOST TOXIC DIOXIN AND IS USUALLY PRESENT IN TRACE AMOUNTS IN TRICHLOROPHENOL WASTES AND IN THE NOW-DISCONTINUED PESTICIDE 2,4,5-T.

OTHER LESS TOXIC DIOXINS CAN BE FOUND IN INDUSTRIAL ORGANIC MATERIALS AND OTHER PESTICIDES, AND THEY HAVE BEEN FOUND TO BE PRODUCED THROUGH COMBUSTION.

I HAVE DIRECTED THAT CRITERIA BE DEVELOPED FOR DIOXINS IN DRINKING WATER, AND I WILL REVIEW THAT IMPORTANT ACTIVITY IN A MOMENT.

THE SAMPLES I HAVE MENTIONED WERE ROUTINELY ANALYZED FOR DIOXINS AT MY MINISTRY'S CENTRAL LABORATORY IN TORONTO, WHICH IS EQUIPPED TO DETECT TCDD TO THE LEVEL OF 0.250 PARTS PER TRILLION AND HAS EQUIPMENT ON ORDER WHICH WILL INCREASE THIS LEVEL TO THE RANGE OF 0.005 PARTS PER TRILLION.

THE MINISTRY OF THE ENVIRONMENT BEGAN ANALYZING WATER SAMPLES FOR DIOXINS IN FEBRUARY, 1980, WITH A DETECTION LEVEL FOR WATER OF 1 PART PER TRILLION. IN AUGUST OF 1981, THE SENSITIVITY OF WATER ANALYSES WAS IMPROVED TO 0.250 PARTS PER TRILLION.

WE ARE IMPROVING OUR LABORATORY CAPABILITY TO ANALYZE FOR EVEN LOWER LEVELS OF DIOXINS AND TO INCREASE INFORMATION AND KNOWLEDGE OF SOURCES AND CONCENTRATIONS IN THE ENVIRONMENT.

A CONTAMINANT SOURCE ON THE NIAGARA RIVER OF CONTINUING CONCERN TO ME AND TO MY OFFICIALS IS THE SEWAGE TREATMENT PLANT IN NIAGARA FALLS, NEW YORK. HERE, AGAIN, WE HAVE MADE MEASURABLE PROGRESS.

ONTARIO HAS BEEN SUCCESSFUL IN HAVING IMPORTANT REVISIONS MADE IN A PROPOSED STATE DISCHARGE PERMIT FOR THIS PLANT. CONTROLS ON THE DISCHARGE OF CONTAMINANTS TO THE NIAGARA RIVER, AS APPLIED BY THIS PERMIT, WILL BE FULLY EFFECTIVE IN 1985-86 WHEN FAULTY CARBON BEDS IN THE PLANT HAVE BEEN REBUILT.

OUR MAJOR CONCERNS WERE RESOLVED IN AMENDMENTS TO THE DRAFT PERMIT. THE AMENDED PERMIT CUTS THE DISCHARGE LIMITS FOR PCBs -- POLYCHLORINATED BIPHENYLS -- BY 75 PER CENT, AND FOR PHTHALATES BY 50 PER CENT.

IT ALSO PROVIDES FOR FURTHER CONTROL OF OTHER CONTAMINANTS IF MONITORING INDICATES THEIR LEVELS ARE CAUSE FOR CONCERN.

OTHER AMENDMENTS INCLUDE A CHANGE FROM MEASUREMENT OF CONCENTRATIONS TO MEASUREMENT OF ACTUAL AMOUNTS DISCHARGED. THE LEVELS ARE SET BASED ON AVERAGE DAILY LIMITS. THESE LIMITS ARE KEYED TO THE PLANT'S DESIGN CAPACITY OF 48 MILLION GALLONS A DAY, RATHER THAN THE 60 TO 65 MILLION GALLONS OF CURRENT ACTUAL FLOW.

THE LIMITS AND THE METHODS OF CALCULATION ARE DESIGNED TO PROVIDE AN INCENTIVE TO THE CITY OF NIAGARA FALLS, NEW YORK, TO REDUCE THE OVERLOAD ON THE PLANT AND TO OPERATE IT WITHIN ITS DESIGN CAPACITY.

AS A RESULT OF THE IMPROVEMENTS NEW YORK STATE HAS MADE TO THE PERMIT, ONTARIO WAS ABLE TO WITHDRAW ITS EARLIER REQUEST FOR A PUBLIC HEARING ON THE ISSUE.

ONTARIO'S COMMENTS ON THE ORIGINAL DISCHARGE PERMIT AND THE PROVINCE'S REQUEST FOR A HEARING WERE FILED IN NEW YORK STATE IN MARCH OF LAST YEAR. THESE ACTIVITIES WERE CO-ORDINATED BY MY MINISTRY'S NIAGARA RIVER IMPROVEMENT TEAM.

WHILE THE REVISED PERMIT DOES NOT ACCOMMODATE ALL THE SUGGESTIONS THE MINISTRY AND THE CITY OF NIAGARA FALLS FILED WITH NEW YORK STATE, OUR MAJOR CONTAMINANT CONCERNS IN THIS PARTICULAR CASE HAVE BEEN RESOLVED. WE CONTINUE TO MONITOR PROGRESS ON THIS PROGRAM.

THIS HAS BEEN A SIGNIFICANT STEP IN CLEANING UP ONE OF THE NIAGARA RIVER'S TROUBLE SPOTS AND AN EXCELLENT EXAMPLE OF HOW INTERNATIONAL COMMUNICATIONS AND CO-OPERATION CAN BE EFFECTIVE WHEN GOODWILL PREVAILS.

WHAT ABOUT CONTAMINANT SOURCES ON THE ONTARIO SIDE? FIRST, LET ME SAY THAT MY EXPERTS CALCULATE -- AND NO ONE IN AUTHORITY HAS CHALLENGED THEM -- THAT 99 PER CENT OF THE ORGANIC PRIORITY POLLUTANTS IN THE NIAGARA RIVER ORIGINATE ON THE AMERICAN SIDE.

NEVERTHELESS, THE MINISTRY IS CONTINUING TO ENSURE THAT ONTARIO INDUSTRIAL AND MUNICIPAL DISCHARGES ARE NOT ADDING TO THE POLLUTION LOAD IN THE NIAGARA RIVER. THESE DISCHARGES ARE MONITORED REGULARLY TO ENSURE THAT THEY COMPLY WITH PROVINCIAL STANDARDS.

IN MAY OF THIS YEAR, THE NEW DEMOCRATIC PARTY RELEASED DISCHARGE DATA FROM CANADIAN SOURCES COMPILED BY MY MINISTRY AND CHOSE TO PLACE AN ALARMIST INTERPRETATION ON IT.

THE NDP QUESTIONED ME IN THE HOUSE OVER ALLEGATIONS THAT EIGHT OF 12 COMPANIES LISTED IN OUR RECORDS ARE NOT MEETING MINISTRY DISCHARGE OBJECTIVES FOR ONE OR MORE PARAMETERS.

IT WAS FURTHER STATED THAT OBJECTIVES ARE NOT IN PLACE FOR "HUNDREDS OF INDUSTRIAL ORGANIC CHEMICALS". THAT LAST PART, AT LEAST, IS TRUE AND HARDLY SURPRISING. I WILL DEAL WITH IT WHEN I DESCRIBE THE FUNCTIONS OF OUR NEW HAZARDOUS CONTAMINANTS AND STANDARDS BRANCH.

THE SHORT ANSWER TO THIS CRITICISM IS THAT ALL SOURCES ON THE CANADIAN SIDE ARE UNDER CONTROL.

THE MAJORITY OF EXCEEDANCES -- OR VIOLATIONS, IF YOU PREFER THE HARSH TERM -- WERE RELATED TO SUSPENDED SOLIDS, DUE PRIMARILY TO THE STRINGENCY OF ONTARIO'S CONTROL PROGRAM.

TO BE PERFECTLY CLEAR ON THE MATTER, IT IS NECESSARY TO DISTINGUISH BETWEEN CONVENTIONAL PARAMETERS -- BIOLOGICAL OXYGEN DEMAND AND SO ON -- AND CHEMICAL CONTAMINANTS.

LET'S NAME NAMES:

ATLAS STEELS AND THE CYANAMID WELLAND PLANT -- BOTH UNDER A CONTROL ORDER AND ARE ON OR AHEAD OF SCHEDULE.

HOLIDAY FARMS -- THIS COMPANY IS PROCEEDING WITH THE DESIGN OF SECONDARY TREATMENT EVEN THOUGH IT IS SCHEDULED TO CLOSE IN SEPTEMBER OF THIS YEAR.

CYANAMID NIAGARA FALLS PLANT AND THE NORTON COMPANY -- THE DISCHARGES HERE ARE PRIMARILY COOLING WATER.

CANADIAN OXY CHEMICALS -- THE COMPANY HAS REDUCED PHENOL LEVELS OVER THE PAST FEW YEARS AND THE LATEST DATA INDICATE THAT OUR OBJECTIVES ARE BEING MET.

FLEET INDUSTRIES AND GOULD MANUFACTURING -- ABATEMENT ACTIVITIES ARE UNDER WAY AT THESE FACILITIES TO REDUCE CHROMIUM AND LEAD DISCHARGES RESPECTIVELY.

THE CONCENTRATIONS OF CONTAMINANTS IN THESE DISCHARGES SHOULD NOT BE TAKEN OUT OF CONTEXT WITH THE ACTUAL QUANTITIES OF EACH OF THE PARAMETERS IN QUESTION.

THESE QUANTITIES ARE FOR THE MOST PART SMALL. FOR INSTANCE, AT FLEET MANUFACTURING WE ARE DEALING WITH 1.3 KILOGRAMS PER DAY OF CHROMIUM. AT GOULD MANUFACTURING IT'S 0.2 KILOGRAMS PER DAY OF LEAD. AT CANADIAN OXYGEN THE EXCEEDANCE IS APPROXIMATELY 20 GALLONS PER DAY OF PHENOL.

AS I HAVE SAID, THESE COMPANIES AND ALL OTHER POLLUTANT SOURCES, POTENTIAL OR OTHERWISE, ON THE CANADIAN SIDE OF THE NIAGARA RIVER ARE UNDER SUPERVISION AND UNDER CONTROL.

LET ME TRACE FOR YOU BRIEFLY SOME OF OUR ACTIVITIES ON THE OPPOSITE SIDE OF THE RIVER. WE'LL BEGIN WITH SCA CHEMICAL SERVICES INCORPORATED OF PORTER, NEW YORK, WHICH OPERATES A WASTE HANDLING FACILITY FOR INDUSTRIAL WASTES. ITS METHODS INVOLVE RECYCLING, WASTE WATER TREATMENT AND LANDFILLING.

SOME YEARS AGO, FOLLOWING A PUBLIC HEARING, THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ISSUED A PERMIT TO DISCHARGE WASTE TO THE NIAGARA RIVER AND A SMALL CREEK LEADING TO LAKE ONTARIO.

IN 1979, FOLLOWING ANOTHER HEARING, SCA WAS PERMITTED TO INCREASE ITS DISCHARGE TO ONE MILLION GALLONS A DAY AND TO BUILD A PIPELINE FROM ITS PROPERTY TO THE NIAGARA RIVER.

MY MINISTRY WAS REPRESENTED AT THE HEARING AND EVALUATED THE COMPANY'S PROPOSAL INDEPENDENTLY. OUR PEOPLE CONCLUDED THAT THE TECHNOLOGY BEING USED WAS CONSISTENT WITH ONTARIO'S PHILOSOPHY, THE EFFLUENT LIMITATIONS AND RIVER DISPERSION WERE MORE THAN ADEQUATE TO PROTECT THE NIAGARA RIVER AND THE NIAGARA-ON-THE-LAKE WATER SUPPLY, AND MONITORING OF THE OPERATION WAS SUBSTANTIAL AND WOULD PROVIDE SUITABLE CONTROL TO MEET THE CONDITIONS OF THE PERMIT. WE SUBSEQUENTLY VERIFIED THIS IN THE RIVER DURING THE FIRST DISCHARGE IN JULY 1982.

I SHOULD MENTION, IN PASSING, THAT NIAGARA-ON-THE-LAKE NO LONGER DRAWS ITS RAW WATER FROM THE NIAGARA RIVER BUT OBTAINS IT FROM A HOOKUP WITH THE ST. CATHARINES SUPPLY AT A POINT IN THE WELLAND SHIP CANAL.

OUR EVALUATION DATA WERE MADE AVAILABLE TO LOCAL RESIDENTS AT AN INFORMATION OPEN HOUSE IN NIAGARA-ON-THE-LAKE IN MARCH OF 1980.

IN OCTOBER, 1981, FURTHER HEARINGS WERE HELD, WITH MY MINISTRY BEING GRANTED OBSERVER STATUS. SCA REQUESTED CHANGES TO ITS DISCHARGE PERMIT IN THE FORM OF INCREASED CONCENTRATIONS OF CERTAIN PARAMETERS.

OUR TECHNICAL EXPERTS EVALUATED THE PROPOSED CHANGES AND WE ADVISED THE APPROPRIATE NEW YORK AUTHORITIES THAT WE WERE OPPOSED, ON GENERAL PRINCIPLE, TO ANY INCREASE BEING GRANTED.

FINALLY, IN APRIL OF LAST YEAR, ANNOUNCEMENT WAS MADE OF A NEGOTIATED SETTLEMENT BY THE SO-CALLED PARTIES OF INTEREST.

OVER THE YEARS, SCIENTISTS AND TECHNICIANS OF MY MINISTRY HAVE CONTINUED TO EVALUATE THE SITUATION AT SCA THROUGH WATER MONITORING AND ANALYSIS, AND REMAIN CONVINCED THAT THE PRACTICES OF THE DISCHARGER, SO FAR, CONSTITUTE NO THREAT TO ONTARIO'S INTERESTS.

THIS IS THE CURRENT SITUATION:

- SPECIAL SAMPLING OF THE NIAGARA RIVER FOR ORGANICS WAS INITIATED IN 1978 ON A MONTHLY BASIS AS A RESULT OF THE POSSIBLE EFFECTS OF NEW YORK STATE LANDFILL SITES ON NIAGARA RIVER WATER QUALITY. THIS IS CONTINUING.

- SURVEYS OF THE RIVERS INVOLVING CLAMS, FISH, SEDIMENTS ETC., HAVE BEEN CARRIED OUT AND ARE CONTINUING.

- THROUGH THE NIAGARA RIVER TOXICS COMMITTEE, THIS MINISTRY IS WORKING TO INTEGRATE STUDIES, TRACING CONTAMINANTS AND ABATEMENT ACTIVITIES AS RELATED TO THE NIAGARA RIVER.

- WE WERE INVITED TO WORK WITH A CITIZENS' REVIEW BOARD TO BE ESTABLISHED UNDER TERMS OF THE NEGOTIATED SETTLEMENT. STAFF WILL ATTEND SUCH MEETINGS IF REQUESTED.

- AN SCA FACILITY, FACULTATIVE POND No. 8, WAS DISCHARGED BY SCA LAST SUMMER. OUR PEOPLE WITNESSED THE DYE TESTS PERFORMED FOR SCA AND CARRIED OUT CONDUCTIVITY TESTS TO MEASURE THE DILUTION FACTORS IN THE RIVER NEAR THE POINT OF DISCHARGE. THEY WERE FOUND TO BE SATISFACTORY.

DURING THE SUMMER OF 1978, THE LOVE CANAL EPISODE BROUGHT TO LIGHT THE SERIOUS PROBLEMS OF DISUSED AND EXISTING CHEMICAL WASTE DISPOSAL SITES. NEW YORK STATE ESTABLISHED AN INTER-AGENCY TASK FORCE WHICH HAS REPORTED ON 200 SITES IN ERIE AND NIAGARA COUNTIES.

SUBSEQUENTLY, THE ENVIRONMENTAL PROTECTION AGENCY HAS ISSUED ITS "OVERVIEW OF ENVIRONMENTAL POLLUTION IN THE NIAGARA FRONTIER" AND AN ASSOCIATED FRAMEWORK FOR A WORK PLAN DESIGNED TO CO-ORDINATE FEDERAL AND STATE ACTIVITIES FOR FASTER REMEDIAL ACTION.

STAFF OF MY MINISTRY MEET WITH EPA AND THE NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION ON A FREQUENT BASIS TO DISCUSS PROGRESS IN CONTROLLING THE PROBLEM AREAS. THE PRIORITY LANDFILL SITES IDENTIFIED BY THE INTER-AGENCY TASK FORCE NEAR THE NIAGARA RIVER ARE BEING DEALT WITH BY EPA AND DEC BY A VARIETY OF METHODS -- VOLUNTARY ACTION, COURT ACTION AND THE U.S. FEDERAL SUPERFUND.

THE HIGH-PROFILE SITES ARE HOOKER SITES. WHEN HOOKER, NEW YORK STATE AND THE U.S. FEDERAL GOVERNMENT BEGIN LITIGATION TO NEGOTIATE CORRECTIVE ACTIONS, ESSENTIAL INFORMATION WAS NOT GENERALLY AVAILABLE TO ONTARIO UNTIL THE NEGOTIATIONS WERE CONCLUDED. WE ARE STRONGLY SEEKING SUCH INFORMATION DURING THE NEGOTIATION STAGE.

ONTARIO OFFICIALS CONTINUE TO MEET WITH EPA AND DEC TO DETERMINE PROGRESS. WATER MONITORING WILL BE CONTINUED. SPECIAL STUDIES OF THE RIVER BOTTOM FAUNA AND SEDIMENTS SUCH AS WERE CARRIED OUT BY US IN 1979 AND 1981 WILL CONTINUE IN CO-OPERATION WITH ENVIRONMENT CANADA.

THIS WORK WILL BE CO-ORDINATED WITH SIMILAR ACTIVITIES BY AMERICAN AGENCIES, THROUGH THE NIAGARA RIVER TOXICS COMMITTEE.

ANOTHER PRIORITY CONCERN INVOLVES THE S-AREA SITE OF HOOKER CHEMICALS AND PLASTICS CORPORATION IN NIAGARA FALLS, NEW YORK.

WASTE PRODUCTS FROM THE MANUFACTURE OF MORE THAN 250 CHEMICALS WERE DUMPED IN THIS SITE BETWEEN 1947 AND 1975. WE ESTIMATE THAT A TOTAL OF MORE THAN 70,000 TONS OF WASTES HAVE BEEN PLACED IN THIS AND THE ADJACENT N-AREA SITES, INCLUDING WASTES FROM THE PRODUCTION OF CAUSTIC SODA, CHLORINE, CHLOROTOLUENES, MIREX, HALOGENATED ORGANIC CHEMICALS AND OTHER PRODUCTS.

A CONSULTING FIRM RETAINED BY OUR NIAGARA RIVER IMPROVEMENT TEAM COMPLETED A HYDROGEOLOGIC REPORT ON THE HOOKER S-AREA WHICH WE HAVE REFERRED TO ENVIRONMENT CANADA, THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND THE STATE OF NEW YORK.

THE REPORT DRAWS THESE CONCLUSIONS:

- THE GROUNDWATER, IN THE FILL MATERIAL USED TO RECLAIM SECTIONS OF LAND FROM THE NIAGARA RIVER AND THE SEDIMENTS IMMEDIATELY BELOW IT, IS HEAVILY CONTAMINATED WITH ORGANIC CHEMICALS ORIGINATING AT THE S-AREA SITE.

- THE GROUNDWATER FLOW DIRECTION IN THIS UPPER LAYER IS PRIMARILY SOUTHERLY, TOWARDS THE NIAGARA RIVER. THERE IS ALSO A DOWNWARD FLOW OF WATER INTO THE UNDERLYING LIMESTONE.

- THE UPPER 10 TO 15 FEET OF LIMESTONE CONTAINS RELATIVELY HIGH CONCENTRATIONS OF ORGANIC CONTAMINANTS. THE GROUNDWATER IN THIS ROCK LAYER MOVES INITIALLY NORTH AND THEN TURNS WESTERLY TO THE NIAGARA GORGE DOWNSTREAM OF THE FALLS.

- THERE IS A "REASONABLE POTENTIAL" FOR SOME OF THE ORGANIC CONTAMINANTS TO MOVE SOUTH TOWARDS AND BENEATH THE NIAGARA RIVER, IN THE DIRECTION OF THE CANADIAN SIDE.

YOU MAY RECALL THAT ON SEPTEMBER 27, 1982, I ANNOUNCED TO THE LEGISLATURE THAT I HAD INSTRUCTED MY STAFF TO PREPARE A SUBMISSION TO THE UNITED STATES DISTRICT COURT IN WESTERN NEW YORK, REQUESTING INTERVENOR STATUS IN THE NEGOTIATIONS BETWEEN THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, AND HOOKER CHEMICALS CONCERNING THE S-AREA SITE.

MY ANNOUNCEMENT CAUSED GREAT CONSTERNATION ON THE PART OF THE FEDERAL GOVERNMENT, WHICH APPEARED NOT TO UNDERSTAND THAT THE GOVERNMENT OF ONTARIO BELIEVES IT HAS A DUTY TO REPRESENT THE INTERESTS OF THE PEOPLE OF THIS PROVINCE WHENEVER AND WHEREVER IT IS NECESSARY TO DO SO.

THIS WAS ALSO A DEPARTURE FROM EXTERNAL AFFAIRS' POLICY OF TACIT SUPPORT GIVEN THE NUMBER OF INTERVENTIONS MADE BY MY MINISTRY IN THE PAST CONCERNING LONG RANGE TRANSPORTATION OF AIR POLLUTANTS.

IN CORRESPONDENCE WITH THE HONOURABLE ALLAN MACEachen, SECRETARY OF STATE FOR EXTERNAL AFFAIRS, AND THE HONOURABLE JOHN ROBERTS, MINISTER OF THE ENVIRONMENT FOR CANADA, I AGREED TO ACCEDE TO THEIR PLEA THAT WE ENTER INTO A PROCESS OF DIPLOMACY AND DISCUSSION.

THIS, THEY BELIEVED, WOULD RESULT IN AN INTER-AGENCY AGREEMENT, GIVING ONTARIO FULL PARTICIPATION IN THE PROCEEDINGS WITHOUT THE NEED TO RESORT TO THE COURTS. I SUBSEQUENTLY MET WITH BOTH MINISTERS TO URGE THE ACCELERATION OF NEGOTIATIONS WITH THE UNITED STATES.

AT THE SAME TIME, THROUGHOUT, I STRONGLY MAINTAINED MY OPTION OF FILING OUR APPLICATION FOR INTERVENOR STATUS SHOULD THE PROCEEDINGS PROVE UNSATISFACTORY.

IT IS NOW NEARLY NINE MONTHS LATER, AND DESPITE NUMEROUS MEETINGS AND CONSIDERABLE EFFORTS ON THE PART OF MY MINISTRY, WE ARE STILL NOT SATISFIED THAT THE PROPOSALS MADE TO US CONSTITUTE OUR FULL PARTICIPATION IN THE NEGOTIATIONS IN A MANNER THAT WILL ADEQUATELY SAFEGUARD ONTARIO'S INTERESTS.

FURTHERMORE, ON MAY 13, THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ANNOUNCED A SERIES OF POLICY AND ADMINISTRATIVE CHANGES IN ITS HAZARDOUS WASTE PROGRAMS, IN AN ATTEMPT TO ACCELERATE SITE CLEANUPS. AND ON MAY 16, THE UNITED STATES GOVERNMENT DECIDED TO PROCEED WITH REMEDIAL INVESTIGATIONS AND FEASIBILITY STUDIES IN RESPECT OF THE S-AREA UNDER THE AUSPICES OF SUPERFUND. IN OTHER WORDS, NEGOTIATIONS WITH HOOKER ON THIS LANDFILL SITE ARE AT AN END.

GIVEN THE COMPLETE CHANGE IN CIRCUMSTANCES, I INFORMED THE HOUSE LAST THURSDAY (JUNE 9TH) OF ACTIONS MY MINISTRY WILL BE TAKING TO ENSURE ITS PARTICIPATING IN MATTERS AFFECTING THIS PARTICULAR SITE:

- THE NIAGARA RIVER IMPROVEMENT TEAM WILL COMMUNICATE WITH THOSE IN CHARGE OF THE SUPERFUND ACTIVITIES AT THE SENIOR TECHNICAL LEVEL, TO ENSURE THAT WE HAVE AN OPPORTUNITY TO PROVIDE INPUT AS THE INVESTIGATIONS AND STUDIES PROCEED. PRELIMINARY INDICATIONS ARE THAT SUCH TECHNICAL INPUT WILL BE WELCOMED.

- SINCE THE FINAL REMEDIAL ACTION WILL LIKELY BE THE SUBJECT OF COURT PROCEEDINGS, I HAVE INSTRUCTED MY STAFF TO FILE OUR APPLICATION FOR INTERVENOR STATUS IMMEDIATELY, AND THUS SEEK A VOICE IN THE FINAL LITIGATION.

NO DOUBT THE FEDERAL GOVERNMENT WILL AGAIN RAISE ITS VOICE IN PROTEST, BUT I MUST REMIND THEM THAT WE CAN NO LONGER AFFORD TO SPEND TIME ON THE UNPRODUCTIVE ROUTE THAT THEY SEEM TO PREFER; NOR CAN THE INTERESTS OF THE ONTARIO PEOPLE BE PROTECTED BY WELL-PUBLICIZED SITE VISITS ON THE PART OF THE FEDERAL MINISTER OF THE ENVIRONMENT.

THE TIME HAS COME, DESPITE FEDERAL MISGIVINGS, FOR DETERMINED ACTION.

I WILL NOT GO INTO DETAIL, BUT STAFF OF MY
MINISTRY ARE CONTINUING TO MONITOR INVESTIGATIONS
AND CLEAN-UP PROPOSALS INVOLVING LOVE CANAL, THE
"N" AREA OF HOOKER CHEMICAL, THE HYDE PARK SITE,
GILL CREEK, 102ND STREET, NECCO PARK, DUREZ AND THE
LAKE ONTARIO ORDNANCE WORKS.

NONE OF THESE SITES FOR CHEMICAL WASTE
DISPOSAL ARE IN ONTARIO. BUT THE AMERICANS ARE AS
FULLY CONSCIOUS AS WE THAT ANY LEAKAGE FROM THESE
SITES IS AT LEAST A POTENTIAL PROBLEM TO THE
INTERNATIONAL WATERWAY OVER WHICH BOTH COUNTRIES
SHARE JURISDICTION.

SETTING STANDARDS FOR HAZARDOUS CHEMICALS

IN ONTARIO, AS ELSEWHERE, OUR ABILITY TO MEASURE MINUTE QUANTITIES OF CHEMICALS IN THE ENVIRONMENT HAS FAR OUTSTRIPPED OUR ABILITY TO ASSESS THE SIGNIFICANCE OF THESE DISCOVERIES. WE HAVE A GREAT DEAL OF CATCHING UP TO DO, AND SO DOES EVERY OTHER INDUSTRIALIZED JURISDICTION IN THE WORLD.

ONTARIO HAS SET STANDARDS FOR AIR AND WATER POLLUTION FOR APPROXIMATELY TWO DECADES. THESE STANDARDS WERE SET, FOLLOWING EXTENSIVE LITERATURE REVIEW AND DISCUSSION AMONG EXPERTS WITHIN GOVERNMENT, TO PROTECT THE MOST SENSITIVE RECEPTORS.

HUMAN HEALTH IS THE MOST CRITICAL CONCERN. HOWEVER, PROTECTION OF FISH, SUPPRESSION OF UNDUE ALGAL GROWTH, THE AVOIDANCE OF IMPARTING REPUGNANT COLOR, TASTE OR SMELL ARE ALSO DETERMINANTS IN STANDARD-SETTING IN NATURAL WATERS.

LIKewise, REPULSIVE SMELLS, UNSIGHTLY SMOKE, AVOIDANCE OF DAMAGE TO BUILDING MATERIALS AND SENSITIVE VEGETATION, AND THE CONTAMINATION OF FORAGE CROPS ARE CONSIDERED WHEN SETTING AIR POLLUTION STANDARDS.

MOST JURISDICTIONS HAVE SET STANDARDS FOR ONLY A SMALL HANDFUL OF ENVIRONMENTAL CONTAMINANTS. THIS IS CERTAINLY TRUE OF THE VAST ORGANIZATIONS TO WHICH WE OFTEN LOOK FOR GUIDANCE SUCH AS THE WORLD HEALTH ORGANIZATION AND THE ENVIRONMENTAL PROTECTION AGENCY OF THE UNITED STATES.

IT HAS RECENTLY BECOME INCREASINGLY OBVIOUS THAT THERE IS A NEED TO SET STANDARDS FOR MANY MORE CONTAMINANTS. THIS IS PARTICULARLY COMPELLING FOR THOSE HEAVY METALS AND ORGANIC SUBSTANCES THAT HAVE GAINED A SINISTER REPUTATION IN TERMS OF PUBLIC HEALTH EFFECTS.

ONTARIO HAS TAKEN AN IMPORTANT STEP TO MARSHAL THE KNOWLEDGE WE NEED IN DEALING MORE EFFECTIVELY WITH CHEMICALS IN THE ENVIRONMENT. WE ARE THE FIRST CANADIAN PROVINCE TO ESTABLISH A SPECIAL BRANCH TO DEAL EXCLUSIVELY WITH HAZARDOUS CONTAMINANTS AND STANDARDS.

MY MINISTRY'S FORMER HAZARDOUS CONTAMINANTS OFFICE IS NOW A PART OF THE MINISTRY'S NEWLY-FORMED HAZARDOUS CONTAMINANTS AND STANDARDS BRANCH WHICH WILL EMPHASIZE OUR FOCUS ON THE MANAGEMENT OF THE LESS WELL-KNOWN POLLUTANTS. AS A FIRST STEP IN ITS NEW MANDATE IT HAS DEVELOPED A CHEMICAL ASSESSMENT PROCESS. THIS PROCESS LAYS THE FOUNDATION FOR THE MANAGEMENT AND CONTROL OF TOXIC SUBSTANCES.

WE HAVE CHOSEN NOT TO PUBLICIZE THIS ACTIVITY WIDELY AND PERHAPS PREMATURELY, BUT I CAN ASSURE YOU THAT SOME OF OUR BEST PEOPLE, BACKED UP BY A SUBSTANTIAL ALLOCATION OF RESOURCES, ARE ALREADY HARD AT WORK IN MEETING THE CHALLENGE. THEY ARE WORKING WITH SPECIALISTS IN OTHER MINISTRIES OF THE ONTARIO GOVERNMENT AND WITH THEIR COUNTERPARTS IN THE FEDERAL GOVERNMENT.

THE TASK REQUIRES THE RECOGNITION OF SEVERAL UNFORTUNATE TRUTHS:

- THE AMOUNT OF KNOWLEDGE ASSOCIATED WITH THE EFFECTS OF THE SUBSTANCES OF THE GREATEST CONCERN AND INTEREST TO PUBLIC HEALTH OR WELL-BEING IS VERY SPARSE.

. AS THE TASK CAN EASILY EXPAND TO INCLUDE THE SETTING OF STANDARDS FOR THOUSANDS OF COMPOUNDS, IT IS VITAL TO ESTABLISH THE ORDER IN WHICH SUBSTANCES WILL BE APPRAISED.

. THE PUBLIC WILL FACE THE NECESSITY TO GAIN AN ABILITY TO WEIGH THE SOCIAL COST AGAINST THE PLEASURES AND BENEFITS BROUGHT ABOUT WITH MODERN TECHNOLOGY, AS WELL AS A FACILITY TO JUDGE THE ACCEPTABILITY OF ENVIRONMENTAL RISKS IN THE CONTEXT OF OTHER RISKS ENCOUNTERED IN LIFE.

IN THE NEXT FEW YEARS, MODERN STANDARD SETTING IS LIKELY TO CRYSTALLIZE SOME DIFFICULT OPTIONS THAT THE SCIENTIST AND THE LAYMAN HAVE LARGELY AVOIDED SINCE THE ARRIVAL OF THE CHEMICAL AGE OF THE 20TH CENTURY.

MORE THAN FIVE MILLION SUBSTANCES -- SEPARATE ENTITIES -- NOW HAVE A NAME. MANY MORE ARE STILL UNNAMED. SOME 60,000 TO 100,000 ARE MORE OR LESS IN COMMON USE IN NORTH AMERICA. OF THESE, ABOUT 200 HAVE CHARACTERISTICS WHICH DESERVE URGENT ATTENTION WITH RESPECT TO PUBLIC HEALTH AND THE ENVIRONMENT GENERALLY.

ALL 200, OBVIOUSLY, CANNOT BE CONFRONTED SIMULTANEOUSLY. FOR ONE THING, THERE ARE SIMPLY NOT ENOUGH QUALIFIED PEOPLE ON THE FACE OF THE EARTH TO DO THE JOB. SO WE MUST ASSIGN SOME ORDER OF PRIORITIES AND DEAL WITH THESE THINGS ONE AT A TIME.

BECAUSE OF WIDESPREAD PUBLIC APPREHENSION, WE INTEND TO START BY CONCENTRATING ON THE DIOXIN FAMILY OF COMPOUNDS. I REMIND YOU THAT THERE ARE NO FEWER THAN 75 MEMBERS OF THE DIOXIN FAMILY. SOME ARE RELATIVELY INNOCUOUS, AND A FEW ARE THOUGHT TO BE LETHAL.

THE PROBLEM IN A CHEMICAL WORLD IS ACHIEVING A STATE OF PEACEFUL CO-EXISTENCE WITH THE CHEMICALS THAT ARE DEEMED TO BENEFIT MANKIND. IT'S EASY ENOUGH TO BAN A CHEMICAL, BUT THAT'S NOT THE ANSWER.

CONSIDER PCBs --POLYCHLORINATED BIPHENYLS. FOR YEARS THEY HAVE PERFORMED A GREAT PUBLIC SERVICE IN ELECTRICAL EQUIPMENT, AS A COOLANT AND FIRE RETARDANT. BUT MEDICAL EVIDENCE SUGGESTS THAT PCBs OUTSIDE THEIR PROPER ENVIRONMENT MAY BE HARMFUL TO HUMAN HEALTH.

PERHAPS THEY STILL HAVE A VALUABLE ROLE AND PERHAPS WE SHOULD CONTINUE USING THEM IN TRANSFORMERS, IF WE TOOK CARE TO KEEP THOSE TRANSFORMERS AWAY FROM AREAS OF POTENTIAL RISK, SUCH AS SCHOOLS AND HOSPITALS. I LEAVE THAT AS AN OPEN QUESTION. THE WHOLE AREA OF RISK ASSESSMENT IN OUR SOCIETY IS HIGHLY TENTATIVE.

IT IS ONLY VERY RECENTLY THAT WE HAD AN ABILITY TO RECOGNIZE SMALL AMOUNTS OF DIOXINS IN RAW WATER IN THE NIAGARA AREA AND IN EMISSIONS FROM A MUNICIPAL WASTE INCINERATOR IN HAMILTON. THERE IS ALSO AN IMPORTANT QUESTION OF THE PHYSICAL AND CHEMICAL BEHAVIOR OF SMALL AMOUNTS OF CHEMICALS IN THE ENVIRONMENT. ARE THEY READILY AVAILABLE TO HUMANS? DO THEY DECAY INTO LESS TOXIC OR MORE TOXIC SUBSTANCES?

THE GAPS OF KNOWLEDGE ARE INDEED LARGE. THEREFORE, TO A CERTAIN EXTENT, THE SCIENTIST'S VIEW OF PRIORITIES MUST BE TEMPERED BY THE CITIZEN'S PERCEPTION OF WHICH SUBSTANCES CAUSE HIM THE MOST MISGIVING. IT IS IMPORTANT THAT THE SCIENTIST DOES NOT IMPART A FALSE IMPRESSION OF HAVING A QUALITY AND QUANTITY OF KNOWLEDGE THAT ARE JUST NOT YET AVAILABLE.

AT THE EARLIEST POINT POSSIBLE IT IS THE INTENTION OF MY MINISTRY TO INVOLVE THE GENERAL PUBLIC IN THE PROCESS OF STANDARD SETTING. AN ADVISORY COMMITTEE MADE UP OF PERSONS OUTSIDE GOVERNMENT IS TO BE APPOINTED FOR THAT PURPOSE. IT WILL BE THE COMMITTEE'S FUNCTION TO CREATE A PUBLIC FOCUS ON WHAT STANDARDS -- OR, IF NEED BE, INTERIM GUIDELINES -- ARE REALISTIC AND ACCEPTABLE.

WHEN IT IS FEASIBLE, IT WOULD BE MOST USEFUL IF THE EXPERTS WHO WILL RECOMMEND STANDARDS FOR A SUBSTANCE TO THE ADVISORY GROUP COULD DEVISE A HIERARCHY OF CONCENTRATIONS THAT AFFECT HUMAN HEALTH AND WELL-BEING AND ENVIRONMENTAL FLORA AND FAUNA.

THE REASON FOR SUCH A HIERARCHY MAY BE IMPORTANT IN DECIDING WHERE AND HOW QUICKLY TO EXPEND EFFORTS IN ABATEMENT. IT IS ALSO IMPORTANT IN THE SENSE THAT THE PUBLIC SEEMS TO BE MOVING TOWARDS THE TIME WHEN IT MUST WEIGH THE ACCEPTABILITY OF RISKS TO PUBLIC HEALTH AND ENVIRONMENT AGAINST THE UNDENIABLY HIGH QUALITY OF LIFE THAT NEW CHEMICALS HAVE BROUGHT TO US.

DESPITE THE GAPS IN TOXICOLOGICAL AND EPIDEMIOLOGICAL KNOWLEDGE, THE TASK OF STANDARD SETTING IS BOTH NECESSARY AND POSITIVE, AND SHOULD BE SEEN AS AN IMPORTANT PART OF PUBLIC EDUCATION IN MAKING RESPONSIBLE JUDGMENTS ON THE VALUE OF CHEMICALS IN OUR LIVES.

AS I REPORTED TO THE HOUSE LAST NOVEMBER 5TH, I INTEND TO ENSURE THAT THE HAZARDOUS MATERIALS WHICH EXIST IN ONTARIO ARE DEALT WITH IN A SCIENTIFIC AND EFFICIENT MANNER, AND THAT WE DEVELOP AND MAINTAIN AN IMPROVED CAPACITY TO REDUCE ANY RISKS THEY MIGHT PRESENT TO OUR SOCIETY.

THE CHEMICAL ASSESSMENT PROCESS WE HAVE IMPLEMENTED IS AN INITIAL AND ESSENTIAL BUILDING BLOCK IN DEVELOPING LONG RANGE PROGRAMS. IT ENCOMPASSES THREE BROAD AREAS OF ACTIVITY: CHEMICAL IDENTIFICATION, CHEMICAL ASSESSMENT, AND CHEMICAL STANDARDS.

TO DATE, WE HAVE IDENTIFIED MORE THAN 200 PRIORITY SUBSTANCES OR CLASSES OF SUBSTANCES WHICH MAY BE OF PARTICULAR CONCERN TO ENVIRONMENTAL AND HUMAN HEALTH PROTECTION. THESE WILL BE SUBJECT TO EXTENSIVE EVALUATION AND DISCUSSION WITH OTHER GOVERNMENTS TO MAINTAIN A COMMON UNDERSTANDING ON A REGULARLY UP-DATED INVENTORY. THE INVENTORY WILL ASSIST FUTURE ACTIVITIES IN FOCUSING RESEARCH INTO THE TOXICOLOGICAL EFFECTS OF HAZARDOUS CONTAMINANTS, AND, IN FORMULATING POLICIES AND PROGRAMS TO DEAL WITH THEM.

CHEMICAL ASSESSMENT IS A COMPLEX UNDERTAKING WHICH, TO BE SUCCESSFUL, REQUIRES CO-OPERATIVE EFFORTS AND LIAISON WITH OTHER SCIENTIFIC AND GOVERNMENT ORGANIZATIONS.

IN ORDER TO DETERMINE THE PARTICULAR RISKS OF HAZARDOUS CHEMICALS, MY MINISTRY IS MAKING AN ASSESSMENT OF EXPOSURE TO OUR POPULATION OF THOSE CHEMICALS AND THEIR IMPLICATIONS FOR THE ENVIRONMENT AND HUMAN HEALTH.

WE ARE CURRENTLY ASSESSING CARCINOGENICITY, MUTAGENICITY, TERATOGENICITY, ACUTE TOXICITY AND ENVIRONMENTAL PERSISTENCE OF THESE HIGH-PRIORITY HAZARDOUS CHEMICALS BY A WIDE-RANGING PROGRAM OF RESEARCH AND REVIEW. THIS WILL PROVIDE A STATE-OF-THE-ART ASSESSMENT OF THE HUMAN HEALTH AND ENVIRONMENTAL EFFECTS OF CHEMICALS TO BE CONDUCTED THROUGH THE MINISTRY'S MONITORING PROGRAMS AND THROUGH AN INDUSTRIAL INVENTORY OF USES OF CHEMICALS GATHERED FROM THE PRIVATE SECTOR.

AS I REPORTED TO THE HOUSE IN NOVEMBER, WE ARE WORKING ON THIS WITH THE CANADIAN CHEMICAL PRODUCERS ASSOCIATION TO DEVELOP A MUCH-NEEDED ONTARIO INDUSTRIAL CHEMICAL SURVEY. THIS IS OUR FIRST MAJOR STEP IN OBTAINING VOLUNTARY DATA ON THE USE, MANUFACTURE, IMPORT, EXPORT, AND EMISSIONS AND DISCHARGES OF CHEMICALS IN THE ONTARIO ECONOMY.

THIS IMPORTANT TASK IS BEING SHARED BY APPROPRIATE SECTIONS OF MY MINISTRY WHICH ARE WORKING TOGETHER TO DEVELOP STANDARDS AND GUIDELINES FOR THOSE CHEMICALS WHICH PRESENT RISKS TO HUMAN HEALTH OR THREATEN THE STABILITY OF THE ENVIRONMENT.

THE LEADING GROUP, THE HAZARDOUS CONTAMINANTS AND STANDARDS BRANCH, IS NOW FORMULATING POLICIES TO GOVERN THE SETTING OF STANDARDS WHERE THESE ARE NECESSARY. AND, AS I HAVE INDICATED, I INTEND THAT THESE POLICIES PROVIDE EXPLICITLY FOR EFFECTIVE PUBLIC INVOLVEMENT.

HAZARDOUS CHEMICAL CONTAMINANTS ARE THE EMERGING MAJOR ENVIRONMENTAL CHALLENGE OF THE 1980s. THEIR PROLIFERATION HAS CAUSED LEGITIMATE PUBLIC CONCERN, AND I AM DETERMINED THAT WE ALLOCATE THE NECESSARY RESOURCES AND SCIENTIFIC ENDEAVOUR TO PROVIDE ADEQUATE UNDERSTANDING AND EFFECTIVE MEASURES OF PUBLIC PROTECTION WHERE THESE ARE FOUND TO BE NECESSARY.

CONCLUSION

I LOOK FORWARD TO DISCUSSING THESE AND OTHER ENVIRONMENTAL CONCERNS AS WE PROCEED WITH THE REVIEW OF THE ESTIMATES. A BOOKLET HAS BEEN PROVIDED TO EACH OF THE COMMITTEE MEMBERS WHICH BRIEFLY OUTLINES THE WORK AND RESPONSIBILITIES OF EACH OF THE PROGRAMS AND ACTIVITIES OF THE MINISTRY. THE BOOKLET ALSO COMPARES THE BUDGETS FOR 1982/83 AND 1983/84.

AFTER THE COMMITTEE MEMBERS COMPLETE THEIR OPENING COMMENTS, I WOULD LIKE TO ASK THAT WE DEAL WITH THE ESTIMATES IN THE ORDER THEY APPEAR IN THE BOOKLET. THIS WILL ENABLE US TO HAVE APPROPRIATE STAFF ON HAND TO ASSIST IN ANSWERING YOUR QUESTIONS.

THERE IS A GREAT DEAL TO BE DONE TO IMPROVE THE QUALITY OF THE ENVIRONMENT AND IT IS MY HOPE THAT THE DELIBERATIONS OF THIS COMMITTEE WILL PROMOTE THE CAUSE OF THE ENVIRONMENT, BRING FORWARD NEW IDEAS AND ASSIST IN THE UNDERSTANDING OF CURRENT ISSUES AND PROBLEMS.

ADDENDUM TO:

HONOURABLE KEITH C. NORTON, Q.C.

STATEMENT RE: MINISTRY ESTIMATES, 1983-84

PLEASE SUBSTITUTE THE FOLLOWING IN THE
ESTIMATES STATEMENT, BEGINNING WITH THE
SECOND SENTENCE OF THE SECOND PARAGRAPH.
MR. NORTON MADE THESE REMARKS ON TUESDAY,
JUNE 21ST FOLLOWING A DECISION AFFECTING
THE NEGOTIATIONS CONCERNING THE S-AREA
SITE.

"ON THURSDAY LAST, DURING OUR FIRST SESSION, I HAD REACHED PAGE 105 OF MY SPEECH, AND WAS ABOUT TO INFORM HONOURABLE MEMBERS OF THE ACTIONS MY MINISTRY WILL BE TAKING TO ENSURE ITS PARTICIPATION IN MATTERS AFFECTING THE S-AREA SITE IN VIEW OF THE U.S. GOVERNMENT'S DECISION TO INVOKE SUPERFUND.

I LEARNED JUST THIS AFTERNOON, HOWEVER, THAT THERE HAS ONCE AGAIN BEEN WHAT I PREVIOUSLY DESCRIBED AS A "COMPLETE CHANGE IN CIRCUMSTANCES".

THE COMMITTEE WILL RECALL, I ANNOUNCED IN THE LEGISLATURE ON JUNE 9 THAT I HAD INSTRUCTED MY STAFF TO FILE OUR APPLICATION FOR INTERVENTION, AND THIS WAS IN FACT DONE ON MONDAY, JUNE 13.

I HAD ALSO INSTRUCTED MY STAFF TO ENSURE THAT WE HAD INPUT TO THE SUPERFUND ACTIVITIES.

WE HAVE NOW LEARNED THAT, FACED WITH THE U.S. GOVERNMENT'S INITIATION OF SUPERFUND PROCEEDINGS, HOOKER CHEMICAL HAS CONCEDED ALL THE POINTS THAT WERE IN DISPUTE DURING THE PREVIOUS NEGOTIATIONS AND WILL NOW SIT DOWN WITH THE UNITED STATES JUSTICE DEPARTMENT TO WRITE OUT THE FINAL SETTLEMENT AGREEMENT.

DRAFTING, REVIEW AND SENIOR MANAGEMENT APPROVAL
OF THE AGREEMENT IS EXPECTED TO TAKE SEVERAL MONTHS,
AT THE END OF WHICH TIME THE AGREEMENT WILL BE TAKEN
TO COURT AND THE FINAL DECISION AS TO ITS ACCEPTABILITY
MADE BY THE JUDGE.

THIS CHANGE MAKES OUR APPLICATION FOR INTERVENTION EVEN
MORE IMPORTANT, AND WE WILL ANXIOUSLY AWAIT THE COURT'S
DECISION AS TO WHETHER ONTARIO WILL BE GRANTED INTERVENOR
STATUS IN THE MATTER OF S-AREA."

(PICK UP TOP OF PAGE 107)

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